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THE
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MONTHLY JOURNAL OF VETERINARY SCIENCE,

FOR 1847.

VOL. XX.—VOL. VI. NEW SERIES.

EDITED BY

MR. PERCIVALL,

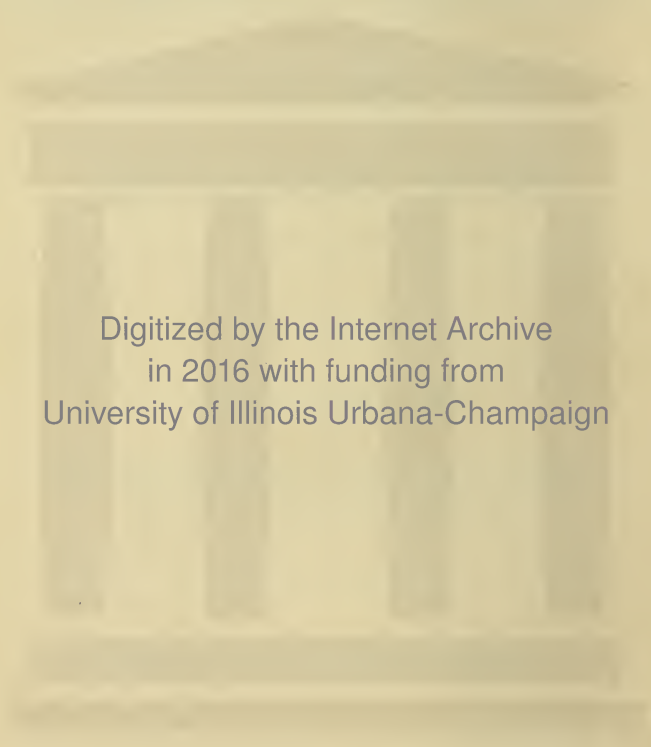
IN COMMUNICATION WITH M. LEBLANC, EDITOR OF THE
"CLINIQUE VETERINAIRE," AT PARIS.

Ars Veterinaria post medicinam secunda est.—*Vegetius*.

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THE

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FIRING FOR SPAVIN.

By WILLIAM PERCIVALL, M.R.C.S. and V.S.

[Continued from vol. xix, page 666.]

THE MODUS OPERANDI OF FIRING will comprise, not only the effects produced upon the skin and subjacent tissues by the red hot iron, but also the relief or aggravation accruing therefrom to the disease on account of which the firing is employed, together with an explanation of the mode or manner in which such relief or aggravation is brought about. It would appear that the physiological effects of firing must be, in their first impressions at least, closely similar to those arising from the application of the *moxa* to the human subject. The pain is "drawn out" from the distempered part by the suddenness and intensity of the shock occasioned by the cauterization to the nervous tissue of the healthy structures around and about it; the parts actually burnt or cauterized having their sensation at once destroyed by the searing of the divided nervous filaments. However painful the operation may be at the time of performance, it appears to leave no more annoyance behind it than a general burning benumbing sensation, under which a horse will take to feeding with as eager an appetite as though he had nothing amiss with him, and will, on occasions, as Mr. Turner assures us, "trot off sound" to his stable. And this will endure until the period of inflammation arrives. Then will this suspended or benumbed sensibility be followed by a morbidly sensitive condition of parts, as well as by increased vascularity. Come to dissect fired limbs, what do we find? Through the earlier stages, red vessels in unforeseen abundance, and of larger size than ordinary, infiltration of the cellular tissue, general thickening and augmentation of substance: through the

later stages, in consequence of a process of absorption, a disappearance of all this increased deposit, proceeding to an abatement or removal of parts in a state of enlargement from disease, and to a shrunk, contracted, braced state of the parts in health; and withal, ending in permanently diminished sensibility, as well as vascularity. In the course of these changes is brought about—in a manner we are not permitted to learn—such a revolution in the morbid orgasm of the fired part as, in the majority of cases, eventually ends in the return of normal structure and function, or in such changes as possess sufficient approximation thereto to enable the animal to use the part or parts, formerly incapacitated from disease, with that freedom which passes under ordinary observation for a condition of soundness.

Both in first impressions and in subsequent effects, blisters and setons fall short of the actual cautery; added to which, the latter in its operation from first to last is found to possess a power of working good in the restoration of parts much injured or altered by disease which the former under no circumstances whatever manifest. We have no restorer equivalent to the hot iron—nothing of equal power to do good or to do harm. With it, with caution, humanity, and judgment, the veterinary surgeon may, without fear of incurring the reproach of the philanthropist or lover of his horse, work a great amount of good; without such judgment and caution, he will be deservedly set down as one who, through ignorance or inconsideration, has put his unfortunate patient to cruel, and wanton, and uncalled-for torture.

THE AFTER-TREATMENT OF THE FIRED PARTS used in former days to be “left to Nature.” After standing tied up in his stall for two or three or four days and nights, the custom was to besmear his fired parts with train-oil, or grease of some description, and then to turn the horse into a loose box, or else at once to turn him out into some field or paddock or straw-yard: thus were the scores made by the red-hot iron suffered, beneath a coating of oil or grease, to scab and fester, and harbour matter under the eschars, which ever and anon fell off, or else got knocked or rubbed off, exposing raw bloody surfaces of *cutis*, from the aspect of which it was evident enough what mischief had been all the while brooding amidst such a medley of grease and scab and matter and filth. And such mischief becomes of a nature not to be repaired. The true skin—the *cutis vera*—is seen becoming ulcerated wherever purulent matter is lodging upon it; the consequence of which is, that the bulbs or roots of the hair are all the while suffering destruction, so that when the chasms made by ulceration come to be healed up, such places are found unprovided with hair: the bulbs or roots from which the hairs spring never becoming rege-

nerated after having once been destroyed. As baldness or "blemish," therefore, according to the old mode of treating, or rather of non-treating, fired limbs proved frequent and extensive, it became an object of great importance to institute some plan of treatment which should save the skin and hair bulbs, at the same time that it afforded some relief to the animal, who, by being neglected, was really suffering more pain in his fired parts than for humanity's sake, after having undergone what he had in the operation, he ought to have been allowed to do. To this point, some years ago, my cousin, Mr. Charles Percivall, called my attention; and it struck me at the time to be one of such consequence that I begged of him to put his thoughts on the subject upon paper. This he did, and sent the same, in the year 1842, to *THE VETERINARIAN**. And so much did they please me on perusal at the time, and such benefit have I derived from the application of them in my practice since, that I feel I shall not be doing justice to this part of my subject if I do not make some extracts from them in this place.

"In the early part of my professional life, being in a sporting country, I was frequently called upon to perform this operation; and, in accordance with the general custom, I paid very little attention to my patient subsequently, and often had great cause to be dissatisfied with the appearance of the animal afterwards, notwithstanding I had taken the greatest pains in the operation. It was not until I had experienced much annoyance from the blemished and unsightly condition of the legs that I began to think seriously on the subject, and to see the necessity of paying more attention subsequent to the operation than I had hitherto been in the habit of doing. The loss of hair, and consequent blemish and disfigurement, which I had frequently met with in fired and blistered horses, I for some time attributed to the presence of some corrosive ingredient in the blister, knowing it to be a common practice with many persons to blister very soon after the operation, and, with some, even at the time of operating: however, experience soon convinced me that I was not altogether right in my conjecture, finding that the same thing took place from firing without any subsequent blistering, and even from using a blister which I knew to be properly prepared. This I found to proceed from the discharge issuing from the cauterized or blistered surface becoming dry and hard, adhering so firmly to the hair that the confined matter or pus underneath produced, in many instances, deep ulceration, frightful sores, and consequent destruction of the roots of the hair; circumstances which induced

* Vol. xv, p. 20—21.

me to adopt a different mode of procedure, in order to prevent a recurrence of the evil, and relieve myself from the too frequent annoyance I had experienced on this head.

“My mode of treatment, although simple, will be found to be very efficacious in preventing the disfigurement above alluded to. At the expiration of a week from the time of operating (or sooner if the legs have ceased to discharge, and are becoming dry and hard), I make my patient stand in a tub of warm water, or foment the legs for an hour and a half, or two hours, every day; carefully removing from time to time the sloughs and scurf, or discharge, and applying a little common oil or lard, which it is of consequence to do before the surface gets quite dry, in order to keep the parts soft and pliable, as well as to facilitate the removal of the sloughs and scabs, or inspissated discharge. In the course of a week, under this treatment, the sloughs will separate.

“In the event of any superabundant granulations, I have recourse to the sulphate of zinc, or sulphate of copper, in solution, &c.

“When perfectly healed and free from scurf, I prefer a loose box to the grass field for a fortnight or three weeks, making use of wet bandages, physic, &c., occasionally leading my patient out to stretch his legs, as circumstances may dictate.”

My own practice is, as soon as the period arrives for fomentation, to have the fired parts daily cleansed by bathing with warm water, and afterwards besprinkled with common (baker's) flour; that, in consequence of being of itself an astringent as well as an absorbent, rendering the use of any lotion or other application, unless in cases assuming an unhealthy aspect, unnecessary.

I likewise quite agree with my relation in his concluding paragraph about the expediency of turning horses out at such a period and such a season. “The system of turning (the fired horse) out in a week or ten days after firing or blistering—the practice of the old school—is, in my opinion, decidedly objectionable. A loose box, together with the treatment beforementioned, until the inflammation attendant upon the operation has subsided, is to be preferred; for, should the animal be placed in a situation which affords him an opportunity of taking violent exercise while the legs are in an inflamed state, or before they have recovered their wonted tone and strength, he is likely to suffer from, instead of being benefitted by, the operation. I have seen many horses that had been blistered and turned out during the summer months taken up with their legs thicker than before turning out, which I could attribute to nothing but their having been driven about by their companions, tormented by the flies, and made to exert themselves when the ground was hard, and at a time when the legs were not in a fit state to bear such exertion.”

POISONOUS EFFECTS OF THE HELLEBORUS FÆTIDUS (STINKING HELLEBORE, BEAR'S FOOT).

By THOMAS MAYER, *sen. M.R.C.V.S., Newcastle-under-Lyne.*

FROM the very deleterious consequences which too often arise from the improper use and administration of varieties of the hellebore family, I consider it my duty to forward you the following paper thereon, to guard the young practitioner from committing himself by their improper employment.

The helleborus fœtidus belongs to the 13th *Class* polyandria; *Order*, the 6th polygynia.

Essent. Gen. Char. : Calyx, none; petals, five or more; nectary, bilabiate, tubular; capsule, many-seeded, rather erect.

Spec. Char. : Scape one or two-flowered, nearly naked, leaves pedate.

Description : It rises to two feet high. The leaves below are numerous, and stand upon long foot-stalks, resembling the former; those above are narrow, lanciolate, of a dark green. The flowers are inconspicuous, green, terminal, upon long peduncles.

History : This plant is found wild in England, and flowers in February, March, and April: it is perennial, growing in shady places and under hedges. The leaves have an acrid, bitter, nauseous taste, and unpleasant smell, especially when they are fresh. When dried, they are frequently given as a medicine to destroy worms, particularly the long round worm, *teres lumbricus*; but they must be used sparingly, being so violent and uncontrollable in their operation as to destroy life.

The family of the hellebores were in great repute with the ancients, who employed them as powerful purgatives in cases of insanity, in uterine affections as emmenagogues, also as powerful diuretics and anthelmintics.

The hellebores have been employed in veterinary medicine for destroying worms, for which purpose the leaves of the helleborus fœtidus have been administered. The powder of the helleborus niger is a great favourite with many practitioners, combined with other preparations, for the cure of mange, and, no doubt, has an excellent effect *in combination*.

The root of the hellebore is also employed by cowleeches for pegging* calves, as a security against being struck; likewise to

* It may not be known to all our readers that "pegging" is another word for piercing the dewlaps or ears of calves and swine, and other animals. In many parts of the country the practice of it is adopted for the *prevention* as

promote counter-irritation in intestinal inflammation. It is employed by the farriers of the olden days for the cure of poll-evil; and it has found advocates in these modern days both at the College and in the country; but it is a dangerous edge tool, and I would caution young practitioners against its general adoption, and advise them to trust more in these cases to the free use of the knife and washing the parts well with the solutions of metallic salts, particularly the oxymuriate of mercury.

In respect to the deleterious effects of the leaves of the stinking hellebore as an anthelmintic, a case came under my observation a short time ago, where a gentleman, from his horse not carrying condition, gave it three half-pints of the leaves chopped small, and, after being digested in some water, mingled in a bran mash. This the animal took the first night without any perceptible inconvenience; he, therefore, on the second night administered similarly two half pints. The following morning they found the animal very ill from violent inflammation of the mucous membranes of the bowels, accompanied with constant and violent tenesmus, and a constant discharge of frothy mucous; but there was no effort to vomit, its effects being more concentrated upon the large intestines. We did not see it till eleven o'clock A.M., when we found the vital powers fast sinking, and it died shortly after.

I consider the use of hellebore root for pegging calves and cows as often fraught with danger, where animals are of bad habit of body, from its tendency to produce erysipelas and gangrenous inflammation. I recollect a case where an ox, belonging to the Right Hon. Earl Talbot, had been pegged with the hellebore root. The animal being in high condition, it brought on most extensive inflammation of a chronic character in this instance, the swelling occupying, when I was called in, the upper part of the front of the neck, down to below the point of the sternum, the wound presenting a yellow sloughing appearance, accompanied with a fœtid discharge. I was not aware at the time of the hellebore root having been employed; but, fortunately for my patient, I adopted an antiphlogistic treatment, under which, with fomentations and mild applications to the part affected, the inflammation subsided, the sloughs came out, and a healthy granulating action ensued. Had I mistaken the indication of cure, and given ale and bark, my patient would very soon have been placed *hors de combat*.

The veratrum album, or white hellebore, belongs to *Class 3d*, polygamia; *Order*, 1st monœcia.

well as for the cure of murrain. It is hardly necessary to add, it is an operation—among some others practised in olden days—of little account or efficacy, and such as a scientific practitioner of the present day would scarcely think of resorting to.—ED. VET.

Essent. Gen. Char. : Calyx, none; corolla, six-petalled; stamina, six; pistils, three; capsules three, many-seeded.

Spec. Char. : Raceme, more than decomposed; corollas, erect.

Description. This plant rises four feet. The leaves are numerous, very large, oval, ribbed, entire, plaited, sessile, vaginans. Flowers bi-sexual; also male flowers, of a greenish colour, on very long branched terminal spikes.

History. Native of Italy, Switzerland, and Austria, flowering from June to August.

Medical Virtues. White hellebore root is a nauseous, hot, acrid substance, which, administered to the horse internally, if not narrowly watched, produces great nausea, efforts to vomit, and acts violently as a cathartic, accompanied with most distressing tenesmus. I saw a case at the London College painful to behold, where, by way of experiment, it had been given in large doses. If pushed further death must be the inevitable result. From its nauseating effects, our late worthy Professor of the London Veterinary College, Mr. Coleman, recommended its administration in small doses, particularly in inflammation of the lungs, for the purpose of lowering arterial action, and consequently the pulse. However plausible the theory might be upon which its administration was based, there is no doubt in those cases where there was extensive inflammation of the mucous membranes of the bronchial tubes and air-cells of the lungs, and consequently *from sympathy* involving the mucous membrane of the stomach and bowels, it killed its thousands; and I fear tottered and tilted many a young practitioner in and out of his saddle, who had come out of the College walls flushed with an idea that it was a panacea in all those varied and chequered cases involving the thoracic viscera. I do consider, when practitioners have safe and controllable remedial measures at their disposal, they are never justified in employing others *except in extreme cases*; as they thereby not only risk the property of their employers, but likewise their own reputation and standing in the profession; and if the latter is of short duration, they are regularly put *hors de combat* for that locality. The white hellebore may be equally employed in combination as the fœtid hellebore for the cure of mange.

CATTLE PATHOLOGY.

Letter from Mr. HENDERSON, London.

Gentlemen,—I OBSERVE in your last number a report copied from the *Mark Lane Express*, tendered by Professor Sewell to the Council of the Royal Agricultural Society of England, of the number of pupils instructed at the College in a knowledge of the diseases peculiar to cattle, sheep, &c. agreeably with the intentions of the society.

I can imagine the intention of the society to be very different to the facts laid out by the Professor, inasmuch as it is well known that there never has been the opportunity afforded the pupils of that establishment of obtaining a *practical* knowledge of the treatment of the diseases of cattle, or operations incidentally necessary to this class; for it is a well known fact, and one admitted by Mr. Simonds, that animals under that denomination are scarcely if ever seen within the walls of the College. This fact may be more the Professors' misfortune than their fault; still I do think that, with a portion of the liberality of the society alluded to in the report, much more might be done than a few mere demonstrations over a dead carcass. Something is said about a cattle infirmary at Islington. Now I would take the liberty of suggesting to the gentlemen forming the Council of the Agricultural Society, to request the Professor to produce a statement, in his next report, of the number and names of the pupils who have received practical instruction at that institution; also of the number of diseased cattle, sheep, hogs, &c. admitted into the Veterinary College during the last two years. In doing this I feel assured the result will prove to those gentlemen that more is required of them to obtain so laudable an object than the mere advance of pecuniary aid. Why could not a portion of this donation go towards procuring diseased subjects for investigation: surely the suburbs of this vast metropolis would afford a great variety were they sought after by any efficient officer of the College employed for that purpose.

I can readily imagine that proprietors of valuable stock would feel reluctant to trust them to persons not famous by *repute* in the successful treatment of cattle diseases; nor can the Professor expect, or the Agricultural Society find, that this most desirable object will be obtained until a more effectual method of teaching be adopted than the mere course of lectures. In a journey through some of the western counties this summer, I have had the opportunity of conversing with a number of respectable farmers, and

my inquiries were naturally directed to the state of veterinary matters, more particularly as regarded its connexion with cattle pathology, and I found there was a lamentable dearth of practical veterinarians, the general complaint being that they were obliged to employ itinerants, or leave things to chance. One very intelligent person, who visits almost every farm of note in the west as a wool-stapler, and whose opinion I consider worth attention, assured me that there was an ample living to be obtained by a good practical veterinarian in every circle of ten miles throughout the country. This leads me to refer to Mr. Tombs's letter, replete with sound facts; for without a thorough knowledge of their profession in all its branches it will be utterly impossible for young men to succeed. Then comes the fact, that if students cannot obtain their knowledge at the London school, it must of necessity be learned by a prescribed servitude with an able practitioner.

It has been urged by some, that gentlemen of education would not be found to wade through agricultural practice: let them bear the consequences, they will soon perceive their error. There are many, I doubt not, who would be willing enough to enjoy the sweets of a profession without undergoing the drudgery; but such men are seldom long before they find their mistake; and I take leave to tell the supporters of such characters, that a want of proper zeal in every undertaking will surely, ere long, meet with its due reward.

Gentlemen, I have penned this with no hostile feelings to any man or society of men, but from a sure conviction that, as rapid strides are now making in every scientific pursuit, it becomes necessary for corresponding movements to meet every circumstance arising therefrom; and I earnestly hope that this letter may have the effect of drawing the attention of persons whose interests are so intimately connected with the improvement of the veterinary art, as may induce them to take a right view of the exertions which are now being made by the Council of the Royal College of Veterinary Surgeons, aided by the body at large.

ON HYDROPS UTERI.

By W. A. CARTWRIGHT, M.R.C.V.S. Whitchurch, Salop.

DROPSY of the uterus may be of two kinds. Either an accumulation of water, hydatids, or an increase of the liquor amnii, or of purulent matter. I shall in a great measure, but not entirely, confine myself to the consideration of the latter in the cow.

Symptoms.—In the cow it does not take place, generally, to any great extent but from the fifth to the eighth month of utero-gestation; nor in other animals until they have been pregnant some time. At first it will be rather difficult to decide whether there is an undue secretion of the liquor amnii, as there may be twins or triplet fœtuses; but when the animal becomes of such an enormous size as renders it evident to all around there is something unusual going on, we must suspect the disease. There will often be straining and attempts made to urinate, and the urine will be ejected in small quantities—constipation of the bowels—appetite bad—great anxiety—increased respiration—disinclination to move about—coat unhealthy—shape contracted—udder small—abdomen becoming more and more distended and pendulous—spine curved downwards—and, as the disease increases, inability to rise. And not infrequently the abdominal muscles will become ruptured, and tremendous hernia take place. Now and then the symptoms will not be of this aggravated character, but the animal will appear in tolerable health and condition, and if it was not for the immense distention of the abdomen and her unsteady gait, little would seem to be amiss with her. In our diagnosis we may be a little puzzled to know whether it is hydrops uteri or ascites, as most of the preceding symptoms may be present in the one case as in the other. To decide this point, I think nothing more will be necessary than for us to introduce the arm up the rectum, when we shall soon find the uterus distended, pressing against us, and almost preventing us from passing the hand up. If we still persevere, and get the arm up to the greatest extent, we shall be able to pass our hand over a large surface of the distended uterus. In ordinary cases of utero-gestation we are able to detect the fœtus by external pressure; but in many of these cases, from its smallness and the large accumulation of water, we are unable to do so. In ascites we frequently have anasarca of the abdomen; not so in this disease.

Causes.—Where this accumulation of fluid takes place, it most probably is the production of the membranes, brought on by some injury they have sustained, either by the movements of the fœtus through the dam, or from some direct external injury. The latter I am inclined to believe is a great source of the disease, as I have known it to come suddenly on by these means. Burns, in his “Principles of Midwifery,” says, “that this is a disease of the ovum, and not of the mother; for even the fœtus itself is often malformed, or, at least, blighted. The affection, in toto, may be considered as a species of monstrous conception. Some particular condition of the parent may, however, in certain cases, occasion it. For instance, it may be connected with a syphilitic taint in either the father or the mother; or with some less obvious cause, impair-

ing the action of the womb, but not directly producing a miscarriage; with lunacy or idiotism; or with a state of general or uterine debility, or with an original imperfection of the ova in the ovarium. All of these causes do not operate uniformly to the same extent, but the fœtus suffers in proportion to their operation. It is either born very feeble and languid, and is reared with difficulty, or it dies almost immediately, or it perishes before labour commences; and this is generally the case when the diseased state exists to any great degree."

That this is sometimes a disease of the ovum may be true; yet I see no reason why the fœtus, after it has been perfectly formed, and has lain growing in the uterus for some months, may not become obstructed in its growth, in consequence of the uterus or fœtal membranes having received some injury from without, whereby an increased quantity of the liquor amnii may be thrown out and may press upon it, and thus either cause its death, or prevent its coming to maturity. Besides, we can well imagine that, where this great deposition of fluid is taking place, the nutrition of the fœtus must be impeded, independent of the pressure. That the womb may become even sympathetically diseased, in connection with other of the large viscera, we have every reason to believe; but at present we are not sufficiently acquainted with the symptoms of the different tissues of this organ to clearly define the sympathy of each part.

Treatment.—I have seen many cases where the animal has become enormously large, and unable to get up without being interfered with; at other times they have fallen on their way, and have been drawn home upon a gate, and in this state they have continued until either natural or premature labour has come on, or the animal has died. I must say, that where the animals' time of utero-gestation was nearly expired, and so long as they appeared in tolerable health, and were active, I would not interfere with them—only keep them quiet and about home. I know of one case where, although she was pretty well over night, she was found dead the next morning, and nothing but this disease was observed on her after death; and no particular symptom, except the great distention of the abdomen, was noticed prior to her death.

As soon as we are satisfied about the existence of the disease, and of our determination to remove all or part of the fluid, our best treatment will be, so as to avoid a rupture of the abdominal muscles or other consequences, to introduce the arm up the vagina, and then with the finger to dilate the os uteri, so as to rupture the membranes. We should then introduce a catheter or canula into the opening, to discharge the liquid. Frequently, in the course of a day

or two, labour pains will come on, the os uteri become dilated, and parturition take place; but, sometimes, from the non-dilatation of the os uteri and relaxation of the sacro-ischiatic ligaments, or from a debilitated state of the uterus, its expulsion will not take place; but in the course of time, as she regains her strength, it will become either wholly, or by piecemeal, expelled. Sometimes the soft parts will be gradually parted with, and the bones retained; at others, if the fœtus is small, a sort of sac will be formed around it in the uterus, and she will become again impregnated. We should always, whenever straining takes place after the waters have been removed, try if possible to dilate the os uteri and assist Nature in the expulsion of the fœtus; but no unnecessary, violent, or undue interference should be made, provided there is not a sufficient relaxation of the soft parts, whatever the result may be. I think it would be quite as well, in these cases, to extract only a portion of the liquid at one time, especially if the term of pregnancy is nearly expired, and repeat it now and then, according to circumstances; for if the whole be removed too great a collapse takes place, and the constitution does not sufficiently rally, but, on the contrary, the animal sinks under it. Whenever a large quantity is taken away, the abdomen must be supported with bandages, so as to give pressure to the viscera and muscles.

Sometimes, owing to the diminished capacity of the vagina and the undilatable state of the os uteri, we are unable to puncture the uterus. Where the former is the case, we may succeed in dilating the vagina by obtaining a boy with a small arm, who will be able to act so as to enable the veterinary surgeon to pass the catheter or canula. But in case we cannot puncture the uterus through the os uteri (and sometimes we cannot from the position of it being altered and bent out of the horizontal line), we must find out other places to do so through; and these, I conceive, are three, viz. the rectum, linea alba, and the off side; and the great consideration is, which is the preferable one.

As to the former place, there is no doubt but what the uterus may be easily punctured with a trochar; for where it is distended it is always found pressing with considerable force against the rectum, scarcely admitting of our arm up the latter. Now, although it may be readily entered here, yet, unless a very long trochar is used, the uterus would escape from the canula after some quantity of the fluid has escaped, and so defeat our aim.

The next place is the linea alba. One would almost be led to believe, that there would be great danger in wounding some of the intestines at this place; but it will be found, under great distention of the uterus, that the intestines are forced towards the spine and diaphragm, and that the uterus lies, entirely, inferiorly and poste-

riorly to the intestines, and may be safely punctured from between the udder and the umbilicus. The other place is the off side of the abdomen. Now, as the uterus, in ordinary cases, is generally found more towards the off side, and particularly so when it is distended in consequence of this disease, there can be no doubt but what it may be readily and safely punctured in the flank, on an horizontal line, a little above the stifle. It may be asked by some, "which is the best place to puncture through?" In reply, I would say that, provided we could gain admission through the vagina and os uteri, the latter would be by far the preferable place, since there would be no danger of injuring the intestines, or of the uterus escaping from the catheter, as by the other methods. Another question may arise, Suppose you cannot puncture through the os uteri, which of the other two places is the best? I think it would be difficult to say which of these places would be the preferable one. It would be a mere matter of choice or convenience, according to the position the animal may be in at the time, or the uterus supposed to be situated, as I fancy one would be as safe as the other. It need scarcely be mentioned by me, that, under whatever circumstance the operation is performed, the constitution must be attended to, and proper tonic medicines administered; and also, wherever the trocar is introduced, it must be plunged in boldly at once to its proper depth. A canula of rather unusual length should be used, for it will be seen that in one instance, on puncturing through the side, after drawing off twenty-five gallons of water, the animal gave a cough, and forced the uterus from off the canula, whilst five or ten gallons remained. For the three following valuable cases I am indebted to Mr. John Steele, veterinary surgeon, Biggar, Lanarkshire.*

CASE I.—In 1837 I was requested to visit a cow, the property of Mr. T. Spence, of Symington, three miles from Biggar. I found her in a bad condition—coat dry and staring—abdomen very much enlarged. I gave my opinion that it was a case of dropsy of the uterus, and proposed tapping, which was readily agreed to by Mr. Spence. The operation was performed the following afternoon, as already described. A great quantity of fluid was discharged; calving pains came on within eighteen hours; but, being from home when sent for, it was late in the evening before I got there: Mr. Spence would let no other person interfere. I found the cow a good deal exhausted. The calf was pretty easily brought away; but she sank in the course of two days. I am still of opinion, that if this cow had been sooner delivered, and properly nursed afterwards, she would have recovered.

* I hope to finish this subject in your next.—W. A. C.

CASE II.—On May 15, 1840, I was requested to attend a cow, the property of Mr. G. Ritchie, farmer, Quothquaw, distant four miles; but being from home, Mr. J. Collyer, a gentleman who had studied the veterinary art, and who lived near, was consulted. He considered it a case of indigestion, and prescribed a dose of physic, as the bowels were constipated, and the abdomen very much distended. In the course of three days Mr. Collyer called, and wished me to visit the cow along with him. He stated that he had given physic repeatedly without effect. On seeing her, I suspected dropsy of the uterus; but Mr. Ritchie assured me that she was always large in the belly, and by percussion I could not feel any fluctuation, the abdomen was so tense. I therefore, in the mean time, ordered more physic, with gentian and ginger, which had the effect of partially moving the bowels; but the pulse kept up about 86, and intermitted every ten or twelve beats. During our third visit, and while we were consulting about the measures to be adopted, we were informed by a servant that the physic had commenced to operate, and had flooded the whole yard. On going out we found the water running down a common sewer leading from the byre with great rapidity, and on entering the byre it was still flowing freely from the vagina: the nature of the case was then apparent. We informed Mr. Ritchie that labour pains would come on during the night or early the following morning. I was called about seven o'clock A.M., and succeeded, without much difficulty, in bringing away twin calves, the one dead, the other living. The cow was in a very weak state after delivery; but by the exhibition of tonics along with gruel and new milk four times daily, she gradually improved, and in about a week she commenced taking grass, and in a short time completely recovered. She gave eight pints of milk daily during summer; was fed during winter, and made excellent beef.

CASE III.—About the middle of May, 1841, I was requested to visit a cow, the property of Mr. J. Gray, farmer, Bud Park, twenty miles from Biggar. Mr. Gray informed me that all the cow-leeches, quacks, and veterinary surgeons in the country had seen her; that some of them had declared that she would have three or four calves, while others confessed they were unable to determine what was wrong. I found no difficulty, simply from the animal's appearance, of pronouncing it a case of dropsy of the uterus. She was so much altered in shape as to be considered a complete wonder by the whole district: many had travelled miles to see her. She had no other appearance of a cow save the head and tail. The belly had fallen down so much that it was within three inches of the ground. From the weight of the enormously distended ab-

domen, the vertebral column was bent like the arch of a bridge inverted. She had fed ill for a month—had taken no food for three days—pulse 90, weak—condition very bad—coat staring and musty. I stated to Mr. Gray that I could relieve her of the water and calf, but was of opinion that she was not at all likely to recover, as the abdominal muscles had given way. The cow being near the time of calving, I introduced my hand into the vagina, and finding the os uteri pretty open, ruptured the membranes. The water came away in prodigious quantity, as if pumped from a well. I remained all night; labour pains came on about twelve o'clock, and she was shortly delivered of a living calf, which, however, died during the night. She then drank a little gruel, and commenced picking hay. When I left in the morning she was eating grass. She continued to improve for three days; but fevered on the fourth, and died. I cannot report the post-mortem appearances, having had no opportunity of making an examination. It appears to me, that if the nature of this case had been detected at an earlier stage of its progress, and the membranes had been ruptured before the abdominal muscles gave way, or if that had been impracticable, paracentesis had been performed, the cow would have had a very fair chance of recovery.

OBSERVATIONS ON CURB.

By E. MAYHEW, *M.R.C.V.S.*

AT the Veterinary School, St. Pancras, the students are taught, that capped hock is a serous abscess, and that curb is a sprain of the long ligament of the calcis, or the annular ligament, or the sheath of the flexor tendons, or strain of one of the flexor tendons, or rupture of the cellular tissue between the perforans and perforatus. Such opinions, proceeding from a mouth that speaks with authority and commands attention, are extraordinary. The first is curious for the grossness of its inaccuracy, and the second is remarkable for being, perhaps, the most indefinite definition upon record. A single application of the scalpel to the point of the calcis can at any time expose the bursa which, enlarged by injury, constitutes capped hock; and the pathological distinctions between serous abscess and inflamed bursæ are so well marked, that it becomes difficult to imagine the degree of ignorance which could confound one with the other. The assertion, however, was positive. It had all the charms of originality; and if wrong, still it made a pretension to superior accuracy. By the side of such a declaration, the ludicrous pretence at definition falls into mean-

ness, and looks more like a school-boy's guess than a master's knowledge.

I have always acknowledged my ignorance with respect to curb; and to the frequent inquiries of my pupils have confessed my want of information. For the last two years I have endeavoured to procure a specimen which could decide the point.

The knackers have been visited to no purpose. Professional friends have lent me their assistance to no effect. Common as curbs may be, it seemed impossible to procure a specimen of the disease for dissection.

At length I have been so fortunate as to obtain what I desired. An aged mare was placed under the care of Mr. Dunsford for treatment. The animal was suffering from farcy, which, not yielding to the most energetic measures, that gentleman advised the mare to be destroyed. The hocks were conspicuously curby, and Mr. Dunsford, knowing my eagerness to possess a leg in this condition, was kind enough to have one forwarded to me for inspection.

I divided the skin in front of the astragalus, and carefully reflected it, so as to expose the structures towards which my attention was specially directed without injuring or disturbing them. All were healthy. One by one the parts were removed and examined, and nothing particular could be detected save only in the perforans tendon. This last was perceptibly enlarged at a place answering to the seat of curb. It shewed some indications of an inflammatory condition. I cut into it, and from the incision pressure caused to exude a thick dark-coloured pus, of the consistency of cream cheese. Division of the tendon exhibited numerous vascular points, and between the fibres could be easily recognised deposits of white lymph.

Such was all I could remark; and the result did not answer to my expectations. I anticipated that the disease would have been more superficially located, and I was dubious whether much that was present ought not to be attributed to the disorder under which the animal was labouring at the period of its death. On reflection, however, aided by further examination of the part, I concluded that the effects presented were not the result of farcy. The tendons are slowly involved, being lowly organized. They are long before they suppurate, and tardy in their attempts at reparation. The inspissated condition of the pus shewed it was no recent production, and fibrinous deposit indicated that the injury was not of very modern date. The animal exhibited the curb well developed; and what I saw, on consideration, I decided to be the ravage of that disease. Nevertheless, a specimen nearer to the acute stage, and disconnected from any possible suspicion, had been more satisfactory. It may be that some of your readers may have the power

to inspect a purer specimen, or, should there be any want of leisure for the investigation, I would humbly offer my assistance, and gratefully acknowledge the obligation.

Perhaps I am to blame if I venture to argue upon a single case, and when I do so it will be more in the hope of instigating inquiry, than of establishing opinions which I put forth only as speculations for the consideration of others. Let it be clearly understood that I insist on nothing which I may advance in this paper. I only seek through the medium of your liberality to communicate with the members of my profession; and as there is unfortunately yet no college or other place where veterinarians assemble and debate, I wish in the pages of your Journal to commence a discussion that may ultimately lead to the recognition of truth.

Reasoning, therefore, on what I saw, the cause of curb became of the utmost importance; for unless the cause could be made to agree with the supposed effect, of course further notice of the subject at present would be injudicious. In the first place, curbs are found generally in young animals, and in such the tendinous structures are most liable to injury. Children are more exposed to sprains than adults. The immediate cause of curb is muscular activity. The horse is always in a state of violent action when a curb is sprung, and leaping is, perhaps, the most ordinary source of the disease. I need not fill your space by recapitulating all the causes which may give rise to curb. One instance is, for the present purpose, as good as a hundred.

During the act of leaping the feet are firmly planted on the earth, and, the fore legs being raised, the whole weight is thrown for a time upon the posterior extremities. This burden, increased by that of the rider, the flexor muscles have to project suddenly over the obstacle which is to be cleared. The effort is a sudden and a violent one. In such an action both the flexors—perforans and perforatus—are brought into play, but the principal strain will be on the former. The perforatus being inserted into the pastern bones, moves the foot only in a secondary degree. The main flexor of the os pedis is the perforans, which is attached to the posterior of the coffin-bone; and as it is the sudden propulsion of the toe against the earth which gives the animal the upward spring, so is the perforans the primary and principal agent in leaping, and, consequently, the part most likely to be injured in the act by the contractile power of the muscle.

A further inquiry into the anatomy of the perforans tendon will also give some idea why that tendon should suffer lesion at the particular point which answers to the seat of curb. Where the tendon originates from the muscle, it is of considerable thickness, and gradually diminishes till it has passed over the os calcis, when

it becomes at the back of the metatarsal bone of one uniform diameter. It does not, however, long continue so, for a little way down it receives the tendon of the flexor pedis accessorius, and is joined by the fibres of the ligamentous band, which take their rise from the lower cuneiform bones and the head of the cannon. Thus strengthened, it proceeds to the pastern, and thence to the foot. Contemplating the arrangement, it needs no argument to shew that the main stress upon the tendon would be exerted upon the comparatively long and straight portion situated at the back of the leg. The force is there more direct in its operation; and as any structure is weak in proportion to its length, somewhere hereabouts the tendon would be expected to fail, if it gave way at all. The point where I found proofs of disease was between the termination of the synovial membrane that facilitates the motion over the bones of the hock and the insertion of the accessories which strengthen the tendon, or at the place where the structure was weakest, and consequently most liable to yield. The disorganization which was present answered to the seat of curb, but also extended for a small distance below the place where swelling is usually observed. It is not improbable that the tendon may be injured beyond the point where the external evidence is seen, for the dense and strong fibrous sheath of the back sinews would effectually counteract the tumefaction, and at the same time produce the acutest pain.

I have probably written more on this subject than I was warranted in doing on such slight authority, but I trust that the inquiry I have opened will lead to some result. So far as I can form any opinion at present, I would define curb to be sprain or laceration of the perforans tendon, induced by the energetic contraction of the flexor pedis perforans muscle of the hinder leg.

When I thus presume to define the disease, I allude only to true curb, and not to that species of false curb which obviously consists of sprain of the ligamentous band, and which exhibits a swelling lower down, more forwardly situated, and inclined to one side, being most frequently seen in the heavier description of animals.

Pathologically, some may be inclined to think that the matter will be of small importance. With such an opinion, however, I would by no means agree. If the important structure my conjectures indicate be the seat of the lesion, then the injury becomes of far more importance than it has hitherto been considered, and the customary treatment certainly demands essential modification. The value of the animal that has recovered from the injury will likewise need reconsideration in our certificates as to soundness; the age at which a horse is fit to follow the hounds may with confidence and for known reasons be insisted on, and probably the sex

be shewn to be of some consequence in the choice of a hunter; for if women are more liable to sprains than men, it has certainly been my fortune to meet with more curbs in mares than horses. We have no statistic on which to establish facts, but I would ask the readers of THE VETERINARIAN whether the like remark occurs to them as the results of their practice.

16, Spring-street, Westbourne-terrace.

REFLECTIONS ON OVER-FED ANIMALS.

By ARTHUR CHERRY, *M.R.C.V.S.*

THE annual shows of fat cattle are suggestive of several important points worthy of consideration. The object of these shows is ostensibly for the improvement of the breeds of those animals reared for the purpose of affording food for man—to produce the largest amount of animal food at the least expenditure of means.

To attain these objects, certain particular points in the form or shape of animals have been found to be requisite, nay, indeed, imperative. The possession of these peculiar points constitute “symmetry;” and in proportion to the degree of development, so is the animal more or less able, under favourable circumstances, to lay on an *excess* of fat.

This power of laying on fat is apart from another peculiarity, which, originally an individual exception, may, by careful selection and attention to the breeding, become permanent. This peculiar quality is that of “early maturity,” which some breeds possess in a marked degree. The professed aim of all good breeders has been the union of these two qualities.

An important question arises respecting the best “size” of animals; whether a large or small variety be the most profitable stock. Opinions have been much divided on this point; but from some cause not easily to be understood, unless it arose from the peculiar views of our “fashionable” breeders, the *large* animal has had the preponderance. That “fashion” or some other local or personal view has been the cause, is obvious; because observation and the reasonings of common sense point more to the opposite; namely, that animals of a medium size, or *rather* below it, are those which arrive earliest at maturity, and collectively return the greatest weight from a given quantity of food.

Another important question suggests itself regarding the policy of over-feeding an animal; and that a large number of animals designed for the food of man are over-fed must be apparent to every

one; and reflection will shew that this operates in a double degree or ratio beyond a certain point. The powers of animal life are capable of assimilation in a great degree: but there are limits to this as to every thing else; and if the means of attaining fatness be carried beyond this natural medium point, a loss is inevitable. Thus, as an illustration; if the weight of a lean animal be represented by 10, and a given quantity of food be represented by 20, the result being a gain in weight of $5 =$ to 15, which may be taken as a medium, an addition of 20 of food would not produce a further gain of 5, as in the first instance, but would give only an addition dependent entirely on the power of the individual animal, the time in which the food having to be consumed being in each case the same; hence, all that portion of nutriment which could not be assimilated, as also the time occupied in the consumption of this latter portion of food, is double loss to the producer. All practical feeders know this fact; but it is not acted on in the manner or to the extent it deserves; for, simple as it seems, its consequences on a large scale are most important.

Early maturity is, again, a most desirable object, and every effort ought to be made to attain it; for if an animal can be produced which shall arrive at a state of maturity, say at four years old, and another can be brought into a similar state at three years old, there is a gain to both consumer and producer of 1 in 4, or a relative proportion of 75,000 to 100,000. These are no idle chimeras, but practical facts, and which must rule and regulate the producer in his future proceedings.

It may appear superfluous to urge these various points; but not so when we see that Associations which were established with the laudable object of improving the breeds of our domestic animals have in very truth outgrown themselves. Can any one at all acquainted with the cattle-shows of the last twenty years say that the last few are what they were, in the display of symmetry, or that there has been any gain in earlier maturity? These points were at their maximum several years since. Size still remains the same; but, alas! where is the straight back, the square quarter, the deep thigh, the good chest? "Echo answers, Where?" It is true, we now and then see splendid forms; but these only shew that there are exceptions, and shadow forth the general degeneracy in the greater degree. The breeders' adage, that "fat covers a multitude of faults," is too correct to be disputed; but if the faults before alluded to shew through the enormity of these mountains of fat, into what a state of degeneracy must the "*crack*" stocks of our highly famed cattle have fallen. It is lamentable to reflect on: even the breeders of these stocks themselves are, at last, aware of the palpable degeneracy which, as *professed* judges, they

ought to have foreseen and prevented ere it commenced. The plain truth is, that for many years past a few stocks only have been the producers of all these obese animals; and from breeding in-and-in, and from pampering, the original excellence is worn out. That benefit was derived from the dispersion of well-formed animals must be admitted; but that was before the degeneracy had become established; the mischief has now gone too far with these "show stocks:" the bad points have existed long enough to be transmitted to the offspring*. Our old fine breeds are in their full vigour still; and, despite of partial clubs, shows, or whatever else "fashion" may for the time sanction, common-sense will keep them as perfect and as famed as they ever were, as our fairs, and more particularly Smithfield, are daily shewing.

Dec. 1846.

EFFECTS OF MEDICINE ON HORSES.

[Continued from p. 624, vol. xviii.]

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

POISON OAK or SUMACH—*Rhus Toxicodendron*.

Sept. 15, 1812.—To a horse in a violent stage of acute glanders, shewing spots of ulceration upon both sides of the septum nasi, and having the submaxillary glands on both sides in a state of enlargement—notwithstanding all which, however, save that he was in low condition, he appeared pretty well in his general health, feeding well, &c.—but as yet having no symptom of farcy, was given \mathfrak{z} j of the leaves of the plant, made up into balls, twice a-day.

16th.— \mathfrak{z} ij twice a-day.

17th.—In consequence of some failing in his appetite, the dose to be reduced to \mathfrak{z} ss twice a-day. And in consequence of his legs swelling, he is to be taken out, morning and afternoon, for walking exercise.

18th.—His appetite having returned, the dose is increased again to \mathfrak{z} j twice a-day.

19th.— \mathfrak{z} ij twice a-day.

20th.—His appetite again affected. Continue the \mathfrak{z} ij balls.

* A curious fact is stated by W. J. Goodwin, Esq., V.S. to her Majesty, in connexion with the breeding of her Majesty's "creams." The sire and dam, brought from Hanover, of the height of *fourteen* hands, became, by better management, in the second generation, *sixteen* or even *sixteen and a half* hands high; and when these larger progeny are sent back to the country of their progenitors, and submitted to the same management, they return, in the like period of two generations, to the original small size.

21st.—Notwithstanding the ℥ij doses were persevered in, his appetite has recovered; therefore now give ℥ij twice a-day.

23d.— ℥iv twice a-day.

24th.— ℥ij twice a-day. The supply of the medicine being exhausted, the dose was necessarily reduced.

2 $\frac{3}{4}$ th had been taken in ten days, and the only visible effects such large doses had produced was impairment of the appetite; until latterly, when soon after taking his medicine, he exhibited symptoms of giddiness in the head, and while at exercise was reported by the man who rode him to stagger about.

STAVESACRE—*Delphinium Staphisagria**.

THORNAPPLE—*Datura Stramonium*.

Nov. 2, 1812.—A chestnut horse, glandered, but in good working condition, and with good appetite, commenced taking ℥j twice a day of the dried leaves of stramonium.

3d.—Dose augmented to ℥ij twice a-day.

4th.— ℥iv twice a-day.

5th.—Yesterday's large doses have taken away his appetite. Nevertheless, they are repeated to-day.

6th.—Refuses all food; is dull, and appears very unwell. The stock of medicine being, however, unfortunately expended, I am unable to prosecute the experiment.

TOBACCO—*Nicotiana Tabacum*.

In the month of January 1805, there arrived at Woolwich ten horses which, on examination by my father, were found confirmedly glandered. It was recommended that tobacco be made trial of in the form of fumigation: accordingly, a fumigating apparatus was procured, and they were all submitted, morning and evening, to its operation. After a week's fumigating, in three of the cases there appeared abatement of the nasal discharges. The discontinuance, however, of the fumigation for a few days was followed by their return in the same profusion as before. This was the only observable effect the fumigation had on their disorder.

The symptoms produced by the fumigation, more remarkable in some than in others, were, disturbed respiration, increasing in some cases to apparent signs of suffocation, giddiness, and stupor; the appetite was not affected, neither were the operations of the kidneys or bowels disturbed.

The fumes of tobacco are at the present day employed with striking advantage in cases of obstinate constipation from colic, &c.

* For the effect of stavesacre on glandered horses, consult the author's "Hippopathology," vol. iii, p. 340.

An infusion of tobacco is used as a dressing for lousiness, and an excellent one it is. But for mange it is manifestly inferior to the *unguent. picis liquidæ*.

VALERIAN—*Valeriana Officinalis*.

December, 1812.—Two ounces of the root of valerian were administered to a horse condemned for glanders, without effect. Next day the same quantity was given, as before, in balls, morning and evening; and the day following like doses were repeated, without even disturbing the animal's appetite. On the fourth day six ounces were given; still no effect.

VIRGINIAN SNAKE ROOT—*Aristolochia Serpentaria*.

November 6, 1812.—It was desired to know whether snake root would take any diaphoretic effect on a horse condemned to be shot on account of having glanders. An ounce was given him in ball thrice a-day, and he was warmly clothed.

7th.—The medicine he took yesterday has made him loathe his food.

8th.—In addition to want of appetite, he has a difficulty in passing his urine; but no diaphoretic effect has been observed. He is much tucked up in his flanks. At night alarming symptoms made their appearance.

9th.—Found dead this morning in his box.

VETERINARY JURISPRUDENCE.

STRINGHALT ADJUDICATED UNSOUNDNESS.

* * For the particulars of this case we are indebted to G. H. Hewit Olifant, Esq., Barrister of the Inner Temple.

Before Justice Cresswell, Liverpool Summer Assizes, 1846.

THOMPSON v. PATTESON.

THIS was an action of assumpsit on the warranty of a horse, the breach of which was wilremhaunch, stringhalt, or spavin.

The plaintiff and defendant were both horse-dealers, and it appeared that the plaintiff met the horse coming to Chester fair, when there was a kick apparent on one hock. The plaintiff mounted and tried the horse, but said he had got a stringhalt;

this the defendant denied, and said there was nothing but the previous kick. The horse was eventually bought for £52, the defendant warranting him "sound, except a kick on the hock." The horse was string-halted on both legs. Veterinary surgeons and other witnesses were called on both sides, who all agreed there was string-halt, but differed in their opinion as to the existence of spavin.

To prove stringhalt unsoundness, Mr. Howarth, of Manchester, a veterinary surgeon, described stringhalt to be a spasmodic affection of the abductor muscle of the hind leg, a nerve coming through the trunk being affected: he said that the horse loses his condition and is not able to do so much work.

Mr. Ellis, of Liverpool, a veterinary surgeon, stated that stringhalt is a disease of the sciatic nerve, rendering a horse less fit for work, and impeding him in backing; that he had practical experience shewing it to be a disease.

Mr. Bretherton, of Liverpool, a veterinary surgeon of twenty-four years' practice, said that stringhalt is caused by pressure on the sciatic nerve; that it increases by work, and is unsoundness. He had seen horses become quite useless from it; that more aggravated cases were seen in the country than any submitted to the Veterinary College; that he had seen horses in his father's stables quite useless from it; that at first it is only observable when the horse is turning round.

Mr. Gregson, a veterinary surgeon, called by the defendant, had attended the horse, and did not consider stringhalt unsoundness; but on being questioned by the Judge, admitted that it frequently gets worse, and when very bad impedes the action of the horse, making him less competent for work.

Mr. Taylor, another veterinary surgeon, said that stringhalt does not impair a horse's condition; he had examined the horse, and considered him sound.

Upon this, Mr. Justice Creswell said, "It is a question for the Jury, whether stringhalt produces those effects which, in the eye of the law, renders him unsound." And in summing up, shortly afterwards, his Lordship said to the Jury, "You have heard the evidence as to stringhalt: if you are satisfied that it is a disease calculated to impair the natural usefulness of the horse, you must find for the plaintiff, it being admitted that the horse had it."

The Jury found a verdict for the plaintiff.

R E V I E W.

Quid sit pulchrum, quid turpe, quid utile, quid non.—Hon.

THE MICROSCOPIC ANATOMY OF THE HUMAN BODY, IN HEALTH AND DISEASE. Illustrated with numerous Drawings in Colour. By ARTHUR HILL HASSALL, Author of a "History of the British Fresh Water Algæ;" &c. &c. Highley, 32, Fleet-street, London, 1846. Parts I & II.

WORKS performed in that department of anatomy denominated "general," in which category comes the one whose title is subscribed, interest equally students in veterinary and human medicine. Bones, muscles, membranes, fat, hair, &c. are essentially the same substances, examine them in what animal we may. The several component tissues and structures of the higher classes of animals—the *mammalia*—are found to present a striking uniformity of aspect and composition; insomuch that any person who has once inspected bone or muscle or membrane in one of these animals, immediately recognises the correlative part in another. Nay, should he prosecute his inquiries in the character of physiologist as well as of anatomist, he will discover analogy between such parts in use as well as in composition; and may, in a *general* manner, safely deduce inferences, in these respects, from one animal body to another. Making allowances for circumstances, he will, as he widens his sphere of inquiry, discover that Nature, ever true to her purpose, has kept all through the congeneres the same wise end in view, though the means and appliances may have been modified to suit the convenience or advantage of the species.

The analogy which strikes our observation as existing between the correlative solids of different animal bodies is yet more conspicuous between the corresponding fluids, it not being in the latter, as in the former, liable to disturbance from any special peculiarities. Blood to our ordinary vision is the same red homogeneous-looking fluid, be it seen flowing out of the veins of a man or an ox, a horse or a dog: bile possesses much the same yellowness and viscosity in one as in the other of these animals; milk, the same white aspect; urine, the same outward characters. Nor are we apt to perceive any differences between these fluids, respectively, in the *mammalia* of different species, until we come to submit them to the test of chemical assay, or to more critical in-

spection—to the scrutiny of the microscope. Potent as microscopic machinery has of late years been rendered, and experienced as many have now become in the management of it, such phenomena as are thereby revealed to us being of a different order from those disclosed through chemistry, and yet, incidentally, reciprocally confirmatory one of the other, are in effect opening to us fresh fields of research;—introducing us, in fact, into a new department of science—MICROGRAPHY, a division of which, of the most importance to us, is “The Microscopic Anatomy of the Human (animal) Body.”

In an organized body, two orders of parts present themselves for microscopic examination, *solids* and *fluids*; and since the former proceed out of the latter, it is in accordance both with nature and reason that the fluids should be the first to be examined.

“Of the fluids themselves (however) it is difficult to determine upon any subdivision which shall be altogether without objection: perhaps the most preferable and useful division of them that can be made is into *organized* and *unorganized*.” such fluids being regarded as “organized” as contain in them “certain solid organized principles, while those liquids which are compounded of no such solid matters, as essential portions of them, should be termed *unorganized*.”

“In the first category, the *lymph*, *chyle*, *blood*, *mucus*, as normal, and *pus*, as an abnormal fluid, would find their places, together with the *milk* and *semen*. The fluids of this class, it will be seen, belong especially to nutrition and reproduction, and admit also, naturally, of arrangement into two series; in the first, those fluids which are concerned in the nutrition and growth of the species itself would be comprised, as lymph, chyle, and blood; and in the second, those liquids which appertain to the reproduction, nutrition, and growth of the new species, as the milk and the semen, would be admitted.”

“In the second category, viz. that of unorganized fluids, the *perspirable fluid*, the *saliva*, the *bile*, and the *urine*, as well as probably the *fluid of the pancreas*, and of certain other peculiar glands, should be found.”

Such is the plan and order of procedure of the work, the fluids first examined being

The Lymph and the Chyle.

Mr. Hassall has very properly cautioned any one about to examine either of these fluids, to take care to collect it *pure* or *unmixed*. “It is a common error to regard and describe the contents of the (thoracic) duct, at all times, and under all circumstances, as

chyle;" whereas "it never contains pure chyle, but during digestion a fluid composed of both chyle and lymph, the former predominating; and, digestion being completed, it is filled with lymph only." This will shew us the necessity of obtaining from the lacteals, and from them only at such time as digestion is being accomplished: "when the animal is fasting, they (the lacteals), like other lymphatics, contain merely lymph."

"The lymph is a transparent colourless liquid, exhibiting a slightly alkaline reaction," which, when left to itself, "like the chyle, separates into a solid and a fluid portion:" the solid matter being fibrin, containing "numerous granular and spherical corpuscles, identical with the white globules of the blood; the serum is transparent, and contains but few of the corpuscles."

"The chyle is a whitish, opaque, oleaginous, and thick fluid, also manifesting an alkaline reaction;" and containing, 1st, *minute particles*, described by Mr. Gulliver, constituting its "*molecular base*," and imparting to it colour and opacity. "Mr. Gulliver has ascertained the interesting fact, that the milky appearance occasionally presented by the blood (of the horse as well as man) is due to the presence of these molecules."—"2d. Granular corpuscles, similar to those contained in the lymph, and identical with the white globules of the blood, but rather smaller."—"3d. Oil globules."—"4th. Minute spherules, probably albuminous," &c.

These summary extracts will serve to shew the useful kind of information conveyed in "Article I," which is a short one; little more, in fact, than an introduction to

Art. II. *The Blood,*

At once "the most interesting and the most important of all the fluids in the animal economy."

"Who, to look upon a dark and discoloured mass of blood, could imagine that the magic power of chemistry could reveal in it the existence of not less than forty distinct and essential substances?" And yet "the micrographer, with zeal unwearible, has even outstripped the progress of his rival, the chemist, and brought to light results of the greatest importance."

Mr. Hassall, in ascribing the formation of the buffy coat of the blood to the comparative tardiness of its coagulation, and stating that such is found to take place "in disorders of an acute, active, or sthenic character," accounts for the additional time occupied in its coagulation, "by supposing that, in the affections named, the blood is endowed with a *higher degree of vitality*, and that therefore a longer period is required for its death to ensue; or, in other words, if the expression may be allowed, that the blood in such

cases *dies hard*. On the contrary, in disorders of a chronic, passive, or asthenic character, in all of which there is a deficiency of the vital powers, as in typhus, anemia, chlorosis, the blood passes to a solid state in a much shorter period than ordinary. In these cases the vitality of the blood is very feeble, and it may be said to die easily. A remarkable difference is likewise observable in the characters of the clot formed in the two classes of disorders named: in the first it is firm and well defined; in the second, soft and diffuent."

In horses the blood exhibits the buffy coat *in a state of health*, and at no period more markedly than at a time when their health or condition is at the highest pitch. This is quite in accordance with the "sthenic" diathesis, though not altogether with the "inflammatory" or "febrile" state of system. For neither in inflammation nor in fever is the buffy coat of horses' blood increased; rather, in general, diminished. After all, however, the buffy phenomenon is very transient—alterable or destructible by any unusual exertion of body. Mr. Percivall, from a horse "to every appearance in perfect health," drew a pint of blood; then had the animal galloped for twenty minutes until he "sweated profusely," and, at the time he was panting from his exertion, drew another pint, by unpinning the orifice in the vein made in the first instance. "The coagulum of the first parcel of blood proved sizy, tough, contracted, and deeply cupped; that of the latter exhibited no sign whatever of buff, was extremely loose and flabby in its texture, so that, when handled, it readily mingled with the serum, and in a much shorter time than the first parcel went into the putrefactive state*."

Most interesting accounts follow, of the form, size, structure, colour, and uses of the red globules, blood corpuscles, or blood discs, as they are now with more propriety designated; which are not tiresomely lengthy or speculative, and yet sufficiently so to afford every required information. The "corpuscular theory of respiration" is altogether very complete and beautiful.

From the red discs Mr. Hassall passes to the consideration of the "white globules" of the blood; "far less numerous," and differing from the red "in size, colour, form, structure, in their properties, and doubtless in their use†." "The uses of the white corpuscles have not been fully determined: enough, however, of their nature has been ascertained to shew that they are closely connected with the functions of *nutrition* and *secretion*."

* Percivall's "Anatomy of the Horse," p. 171.

† Spallanzani was the first to notice the existence of two forms of globules in the blood of salamanders; Müller verified their presence in that of the frog, and M. Maudt detected them in man and mammalia.

In disease they are proved to be present in the blood "in increased numbers:" thus, "Gulliver, Davy, and Auccli, have observed them in unusual quantities in inflammatory affections, and especially in such as are attended with suppuration. Mr. Siddall and Mr. Gulliver have repeatedly observed them in vast numbers in the horse, especially when this animal has been suffering from influenza."

With these extracts, which insensibly have become lengthy beyond our anticipations, we close our notice of a work—in its inchoate state—of an exceedingly pleasing and interesting character;—interesting, we repeat, equally to the veterinary and human surgeon, and rendered, so far as it has gone, doubly so to both by a number of coloured drawings, evincing great pains-taking and fidelity on the part of the artist, and tending most materially to the elucidation of the text, as well as to the value of the books to which they are attached.

Extracts from Domestic & Foreign Journals, Veterinary, Medical, Agricultural, Sporting, &c.

AN ESSAY ON CHRONIC PODOTROCHOLITIS.

By DR. BRAUELL, *Professor at the University of Kasan.*

Analysed and translated by M. S. VERHEYEN.

[Continued from vol. xix, page 535.]

ACCORDING to Turner*, the primary source of navicular lameness lies in the too absolute and prolonged rest which horses enjoy in the stable; he considers that this destroys the elasticity of the frog, and induces contraction of the hoof. Turner divides contraction into simple or general, and partial or occult. The first variety consists in a diminution of the transverse diameter; the second is manifested in the concavity, thickness, and hardness of the sole, in the ascent and hardness of the frog, the depth of the commissures, the height of the heels and quarters, the thickness and perpendicular direction of the wall, the contraction of this part towards the region of the quarters, and the weakening of the internal quarter. Turner is of opinion that one or the other of these varieties of contraction always precede chronic podotrocholitis;

* VETERINARIAN, vol. ii.

but that the occult variety most frequently produces the disease, because it exercises a strong degree of compression upon the coffin bone and the navicular, producing an elevation of the first of these two bones. Goodwin* agrees with Turner respecting the rest in the stable, but does not consider contraction of the hoof to be the cause of navicular disease, but that it arises from a diminution or total loss of the elasticity of the frog; whence results a contusion of the perforans tendon between the frog and the navicular. He adds, that all horses, when in repose, like to have the pasterns elevated, and this position favours the ascent of the frog and sole; and that as these two component parts of the hoof are found to have assumed a fixed position in consequence of prolonged rest, it needs but a gallop over the pavement to produce contusion of the tendon and chronic podotrocholitis.

There is no doubt that prolonged rest in the stable is prejudicial to the good qualities of the hoof, and may contribute to induce a diminution of the elasticity of the horn, especially as inactivity prevents to a greater or less degree the beneficial effects of alternate contraction and expansion; nevertheless, it is the high temperature of the stables, and the dryness of the walls of the hoofs, which are more potent causes of the contraction and annihilation of the elasticity of the frog, than the prolonged rest upon which Goodwin and Turner lay such stress. Farmers' and peasants' horses are generally confined to the stable during the greater part of the winter, but the hoof is kept sufficiently soft to prevent all possibility of contraction taking place.

The ascent of the frog, admitted by Goodwin as the consequence of prolonged repose, actually does take place; the fatty frog first is elevated, and consequently draws the horny frog up with it: this is particularly observable in horses that stand over, and in such as are upright upon their pasterns. In this position, the suspensory ligament of the pastern causes the elevation of the entire fatty frog. If, to the already mentioned defects in the normal perpendicularity of the limb, be added circumstances which favour the drying of the hoof, it is evident that the elevation of the frog will become permanent, and that, if these causes are prolonged, it will in the end lose all power of recovering its natural position. I shall not stop to combat the singular opinion of Turner, that the bone of the foot changes its place, and approaches nearer to the coronet: there is no question of an actual displacement of this bone, and I deem it superfluous to inquire into the causes of it.

I divide the CAUSES of chronic podotrocholitis into *predisposing* and *occasional*. To the former belong the execution of the func-

* VETERINARIAN, vol. iii.

tions devolving upon the trochlea of the foot, as well as the various kinds of contraction which may impede those functions by pressure from below.

In the action of the horse, the navicular bone rises and descends upon the perforans tendon, at the same time that it is forcibly pressed against this tendon. Nature has contrived a secretory membrane for the constant lubrication of these two fricating bodies, and has thus prevented the injurious effects so likely to arise from the continual friction going on between them; but if, from any cause whatsoever, this friction becomes too great, nature is no longer able to prevent the parts from changing their physiological state. I saw in a horse of the Lithuanian breed, so oblique upon his pasterns that at each step the fetlock touched the ground, an entire detachment of the fibres from the anterior surface of the flexor tendon, opposite to the sesamoids. This morbid alteration, identical with that observable in podotrocholitis, evidently arose from the position of the inferior joints of the limbs, and the excessive friction of the tendon against the bone. If the gliding of the tendons over the trochleæ of the hind legs be not attended with similar effects, it is attributable to the circumstance of the friction being considerably less, as well as to the weight being more supported by the upper joints of these limbs. The structure of the fore and hind extremities being different, they have different functions to fulfil.

The posterior limbs are the actual locomotive agents of the body; the anterior limbs are but its supporters: hence their structure must be based upon different principles. To the hinder legs belong elasticity and propulsive power; to the fore, resistance. Nature has attained her aim by making the former like a grasshopper spring, and assimilating the latter to a column.

If we examine the posterior extremities, from the quarter to the pastern, we shall find that, whether at rest or in action, the bones are united, two and two, by their articulatory ends meeting and forming angles, the sines of which are greater or less according to their conformation. The pelvis forms an angle with the femur, the summit of which is directed backwards; the femur forms another angle with the tibia, in an opposite direction to the former; and the tibia again, by its union with the tarsus and metatarsus, produces an angle which extends from before backwards. All these angular flexuosities are permanent; they never become straightened even when the horse rests his whole weight upon one limb; the opposition of the flexors and extensors constantly maintains a more or less perfect equilibrium. This disposition may be regarded as a spring composed of a succession of pieces, whose elasticity resides in the muscular apparatus: hence it results that

the chief portion of the weight of the body falls upon the muscles, which ought to be considered as cords extended between the articulations; and as the angles of these latter never become effaced, they act as distributors of the actual weight of the body.

It is not, however, thus with the fore extremities: their perpendicular position causes the weight to fall more upon the bones than the muscles. This difference has already been established by Borelli*, the celebrated founder of the intramathematic school. The shoulder-blade forms with the arm an angle directed forwards; the angle of the arm with the fore arm and elbow has an opposite direction: from the elbow to the pastern the limb is perpendicular. Thus between these two points the line of perpendicular is not interrupted, for the carpus when supporting weight is, in fact, in a state of extension; while, under the same extension, the hinder extremity presents an additional angle. The perpendicular direction of the carpus being indispensable, when the weight falls upon the limb, this articulation being destined solely for the purpose of flexion, contributes nothing to the division of the force, and thus the fore extremity has one distributor less than the hind. A greater amount of weight descends upon the pastern thence to be transmitted to the foot.

The muscular attachment of the shoulder-blade to the trunk, and the exceedingly moveable articulation formed by the scapula with the arm, give to these parts a great degree of elasticity, considerably surpassing the deadening power of the coxo-femoral articulation. While the lever-like arms presented by the long bones of the hinder extremities possess greater extension than those of the fore-legs, the femur and tibia are longer than the humerus and radius: the two former re-unite at the stifle in a less obtuse angle, and thus confer upon this articulation a more extensive motion than is possible for the humero-cubital joint to possess. The stifle, which may, at least, be compared with the shoulder in the effect with which it counteracts all reaction, surpasses the humero-cubital articulation in this respect; this being to the stifle what the coxo-femoral articulation is to the joint of the scapula and humerus. It is also remarkable that the coxa at its union with the sacrum possesses but a limited degree of mobility; but this mobility being united with that with which the lumbar ver-

* De motu animalium, Neapol. 1734, l. 127: "Hinc forsitan est quod pedes anteriores quadrupedum paucioribus et minus validis musculis donantur, quia scilicet articulis in directum extensis et perpendiculariter ad horizontum erectis insistent solent et ideo sua ossea duritie ad instar columnarum pondus animalis sustentare possunt. Cum e contra pedes posteriores quorum articuli nanquam directe extenduntur sed semper inflexi sunt dum animal stat, a vi musculorum retineri debent in tali curvatura."

tebræ are endowed, and the hinder ones especially, these bones also contribute their share in warding off shocks.

If we weigh all these considerations, it will be evident that the fore extremities are distinguished from the hinder ones, setting aside the less flexibility of the pasterns, by an inferiority of power, by the distribution of the weight, and by the diminution of percussion. We must also take into account the head and chest, which, being inclined beyond the basis of support, draw the fore-legs from the centre of gravity, and oblige them, during the act of progression, to receive the impulsive power communicated to the machine by the hinder extremities: finally, the fore-feet actually support a greater degree of weight, although endowed with inferior means of opposing and multiplying re-actions. It would be superfluous to enter into any demonstration of the destructive influence which such a disproportion must necessarily exercise over the whole of the limbs*, and especially upon the extremities of them, the feet. It increases the pressure and friction which the trochlea undergoes, and gives to the fore-feet a more decided predisposition to take on chronic podotrocholitis.

The fore extremities, then, sustain shocks less easily, in consequence of the conformation of their upper parts; but this defect is, in some degree, compensated by the great elasticity of the hoofs of the fore-feet, the walls of which diminish in thickness from the front backwards. This property, however, involves predisposition to various forms of hoof-bound; and all causes liable to limit or annihilate the property of the sole and the frog to yield to pressure from above, tend to predispose to podotrocholitis, since they give rise to a compression of the tendon and the navicular bone. To these causes belong that partial contraction of the sole and frog spoken of by Turner and Goodwin. This kind of hoof-bound, which, as we have already stated, is characterised by the concavity, thickness, and hardness of the sole, by the contraction and hardness of the frog, by the depth and shrinking of its clefts, is generally accompanied by a total or partial contraction of the wall of the hoof. In the latter case, the dimensions of the hoof are so sensibly altered, that the superior transverse diameter exceeds that of the plantar surface; and the obliquity of the quarters is so great, that two imaginary lines drawn from the coronet, sufficiently prolonged, would meet; and, if a third transverse line were drawn from one side of the coronet to the other, uniting with the other

* The considerations into which I am about to enter will also account for the more frequent occurrence of exostosis on the fore than on the hinder limbs. The Clinical and Chirurgical Journal of the lately suppressed Veterinary Institution at Wilna shews that, in sixty-eight cases of exostosis, sixty-five affected the fore-legs, and only three were found on the hinder ones.

two, a triangle with unequal sides would be described. It may be admitted as a general rule, that this kind of contraction of the wall almost invariably occasions partial contraction of the sole and frog; for, accordingly as the transverse diameter of the plantar surface of the hoof diminishes, the arch of the sole and the elastic property of the frog ought to increase. This form of sole causes the crest of the frog not only to predominate over its superior surface, but also to describe a perfect curve, which shrinks away, in consequence of the transverse diameter of the sole. According to the laws of mechanics, the tension of the curve increases towards its summit, while at the base it entirely loses the power of dilatation; and when the lower parts of the quarters incline towards each other, they act as opposing powers, and considerably diminish, if not altogether annihilate, the dilatative power of the hoof.

The consequences of these alterations are—lateral compression of the ligamentous apparatus and bones of the foot, contraction of the laminae of the quarters, and a consequent diminution of their elasticity; for of two cords equally stretched, the longer one will always communicate a greater amount of impulsive power than the shorter one. Although the coffin-bone takes on all the various forms of the hoof, the ligamentous apparatus is not less compressed from below, and forced against the perforans by the arching of the sole; the fatty matter deposited in the cells of this apparatus disappears, and thus is the elasticity deprived of another of its elements. If to these circumstances be added the thickness and hardness of the sole, the loss of elasticity in the frog consequent upon its ascent, and the lateral compression which it undergoes; if we come to reflect that the faculty of yielding is lost to both these parts when they are compressed from above, it becomes evident that, the weight of the body falling upon the navicular bone and the tendon, these organs must undergo a double amount of pressure, on the one part acting from above downwards, on the other from below upwards. This latter force must naturally constrict the perforans and the navicular, especially where accessory circumstances concur to increase its intensity*.

All unnatural pressure upon the navicular bone, whether coming from above or below, tends to increase the friction of the tendon upon this bone, and is liable to create podotrocholitis. To occasional causes belong the rapid and prolonged paces of saddle horses, leaping of ditches, gates, hedges, &c., sudden springs during a hard trot; galloping upon rough uneven ground, or upon

* I have never yet seen chronic podotrocholitis in *flat* feet furnished with an abundant frog. Nor am I the only person who has made this observation, which, in itself, tends to prove that partial contraction of the sole and frog plays a very important part in the affections now occupying our attention.

pavement, or hard stony roads; false steps, in which the toe supports itself while the heels require to be considerably lowered before they can touch the ground.

AND DOES NOT CHRONIC PODOTROCHOLITIS OCCASIONALLY ARISE FROM INTERNAL CAUSES?—Here is a question which cannot be answered with any degree of certainty. No demonstrative proofs, either negative or affirmative, can be furnished: analogy alone can guide us, and, reasoning from that, we should be inclined *to reply in the affirmative*. In point of fact, the extremities have sympathetic relations with other parts of the body. How often do we not see affections break out in the limbs dependent wholly on internal causes, or referrible to some other suffering organs? To corroborate this observation by example, I will cite the case of a Russian mare, twelve years old, in which diarrhœa alternated with lameness so regularly, that, as soon as the flux of the body ceased, it was succeeded by lameness of one or the other of the fore-feet, the foot becoming hot and sensitive. One of these two affections was constantly present. No sooner had the antiphlogistic remedies caused a cessation of lameness than diarrhœa came on; and the moment this yielded to treatment, the animal again went lame. To this class of lesions belongs the interesting case given by Mercier*, of carditis, accompanied by lameness of the right fore-leg, with great pain in the scapulo-humeral articulation: it was dissipated after about two days, and then flew to the coxo-femoral joint. I would also recall to mind founder, arising from too rich and plentiful feeding: this would seem to indicate the existence of some very close relationship between the limbs and the digestive apparatus. Then, again, lamenesses of foals, where the disease is situated in the same tissues as chronic podotrocholitis. These two affections present more than one analogous point. The ringbone which Ammont† witnessed, attacking six-months old foals that had just been cured of glanders. Gurlt‡ also inclines to this opinion; for he reckons, among the causes of osteitis, diseases which affect the animal economy generally, and principally *rheumatism*. Traeger§ goes even farther, for he refers ringbone, spavin, splent, &c., to an arthritico-rheumatismal temperament. This idea is, perhaps, too much generalized, but when restricted within proper bounds it seems exceedingly probable. Prosecuted researches are requisite to solve these interesting questions; to which I may add the problem of the causes of intermittent typhus,

* Recueil de Médecine Veterinaire pratique, 1841, p. 240.

† Handbuch der gesammter Gestütskunde und Pferdezuucht Koenigsberg, 1833.

‡ Lehrbuch der Pathologischen Anatomie. Th. I, p. 103.

§ Magazin für die gesammte Thierheilkunde, Jahr V, p. 206.

remittent with lameness, the local pathological lesions remaining the same. In some cases I have met with chronic podotrocholitis accompanied with caries of the navicular bone, and other disorders, although the horses had not shewn lameness before death. We may at any rate regard it as a general rule, that lameness is not caused solely by inflammation of the trochlea of the foot; but that other circumstances are necessary to its development, its aggravation, and its periodical recurrence. This consideration brings us back to spavins, and the intermittent character of the lameness they occasion; and, lastly, to the odontalgic pains excited by caries of the teeth. Years may pass away without a carious tooth becoming manifest; suddenly a violent pain attacks it, and this again ceases, notwithstanding the continuance of the caries. In a case of this nature, the caries does not of itself explain the *odontalgia* in a satisfactory manner; admitting, however, that it were so, to what cause must we attribute the regularity of the attacks of pain, if not to some peculiar dynamic modification of the economy? May not similar modifications be the cause of the increase, periodical diminution, and intermittence of the lameness, in chronic podotrocholitis? Is it advancing too much to conclude that the pain, the first source of lameness, is but the reflex consequence of some general modification of the economy, or of some other morbid action? Veterinary pathology furnishes us with various instances of local irritations which are but sympathetic phenomena. I will cite the irritation of the skin in *hydrorachitis* in sheep, when the animals bite themselves, and gnaw their wool; and epilepsy in pigs, wherein I have seen the animals devour their fore-legs, &c. These extraordinary phenomena may be compared with the observations on the human being made by Brodie*. "A patient," says Brodie, "is suddenly attacked during the night with violent pains in the feet, while at the same time he has heart-burn in the stomach. The pains disappear as soon as the acids become neutralized." He quotes Dr. Wollaston, who, after having taken an ice, experienced dreadful pain in the ankle. On the ice being thrown off his stomach by vomiting, he gained immediate relief. In another individual labouring under stricture of the urethra, pain established itself in the instep: the introduction of a bougie sufficed to cause it to disappear.

Prognosis.—Turner designates the navicular disease "the *curse upon good horseflesh*;" a characteristic epitome of its prognosis. Chronic podotrocholitis is, in fact, one of the most insidious of diseases. Lying latent for a considerable period, all the while working destruction, when taken in hand, it resists the healing

* Brodie's Lectures on Diseases of the Nerves.

powers, offers the greatest obstacles to medical treatment, and, where it is inveterate, constitutes a sore for which we have, as yet, discovered no balm. Too frequently it happens that we are foiled in attempting a cure; the horse is left unfitted for use, to fall, in the end, under the axe of the slaughterer.

The disease has its seat in parts composed of a tissue endowed with a species of vegetative life; and we all know from experience, that, when once such parts get out of their normal condition, it is difficult to restore them to their primitive state. We also know that chronic phlegmasia of fibrous tissues, and *caries*, are in general very obstinate affections. The continual friction of the diseased parts one against the other renders such lesions more serious; and their situation isolates them from any direct influence of therapeutic agents. All these circumstances united, cause chronic podotrocholitis to be always an extremely dangerous affection.

At its commencement, when we may suppose that as yet but simple inflammation exists, and while the condition of the animal is such as to admit of the application of a rational course of treatment, the prognostic becomes rather more favourable. But if the disease be of long standing, if there be cause to apprehend such effects of inflammation as caries, or partial destruction of the tendon, chronic podotrocholitis will resist most obstinately all modes of treatment, however judicious and persevering. The symptoms indicative of a high degree of chronicity are, sinking and depression of the wall, and rims formed around the hoof; lastly, atrophy of the muscles of the shoulder. These indicate advanced stages of the local disease, and the ravages it has made.

Complication with other foot affections is much to be feared; for the inflammations of the other tissues react upon the principal disease, and render its progress more rapid and dangerous.

When both feet are simultaneously affected the prognostic is particularly unfavourable. The horse cannot then spare either of the suffering parts for rest; the compression and friction become permanent; causes which offer incessant impediments to the sanatory tendency of any treatment employed.

In all cases the prognosis should be pronounced with caution. When the disease is of long standing, or complicated, or established in both feet, the owner can only be informed that there is a *possibility*, and from all appearances a probability, that the issue will be fatal. It is also necessary to act with prudence and circumspection when pronouncing on the stage of the disease; since it often exists for a length of time unperceived, and is said to be incipient or recent when inflammation, with all its morbid consequences, has already been for some time developed.

Therapeutics.—If the pathology of chronic podotrocholitis owes

much to the English, the therapeucy of this affection is even more indebted to them, they having suggested and applied various means of cure, the principal of which deserve to be mentioned.

Turner has devised two modes of treatment: the one is undertaken with a view to obtain a resolution of the inflammation; the other, to prevent the compression of the navicular bone. The following is an account of his mode of proceeding. "The *horny* sole to be pared till small specks of blood begin to appear at every part; the bars to be entirely removed, and the channels or commissures between the bars and the frog to be excavated with a narrow drawing-knife to the quick, from end to end; the projecting part of the crust, which forms the ground surface, to be somewhat levelled with the rasp from toe to heels; but the shortening of the toe and lowering of the heels to be deferred till another stage of treatment." The hoof having been thus prepared, he takes blood (*locally*) from the toe of the foot "until the system is affected generally." This is followed by "the entire removal of crust or wall at the inside heel, and of the bar adjoining." The hoof is afterwards shod with a bar-shoe "bearing on the outside quarter, and slightly on the frog." And now the whole foot is enveloped in a cold emollient poultice. Internally, Turner administers the half of a physic ball, and then has the animal put into a loose box. On the following day the cold poultice is replaced by a warm one of a similar nature, which is renewed every day. On the third or fourth day the horse is walked about; on the fifth or sixth the shoe is taken off, and, if the wound whence the blood was taken is cicatrized, the local bleeding is repeated on the outer side of the toe. Before performing this bleeding, however, Turner lowers the toe and the quarter until only just enough is left to admit of the shoe being put on: the half-dose of physic is repeated, the animal is allowed two or three days' rest, and then again exercised. A week after the second bleeding an ointment of tar and lard is applied to the sole, and the emollient poultices still continued to the crust. The toe is shortened every fourteen days in such a way as to develop its sensibility, without however approaching the soft parts immediately below the horn too closely. Turner's intention in acting thus is to compel the horse to throw more weight upon the navicular bone, to cause depression, and to favour the dilatation of the quarters. When he meets with a desperate case, he allows the quarters to grow in order to diminish the pain, and so to render the horse still capable of some kind of work. In order to relieve the navicular bone of some of the weight thrown upon it, he transfers that weight to the toe, by putting on a shoe with thick heels or calkins.

I do not consider it necessary to prove, by demonstration, that

the mode of proceeding pursued by Turner is partially based upon preconceived ideas and false principles. His second mode of treatment, comprising the depression of the coffin and navicular bones, is founded on the erroneous opinion that there exists some dislocation of these bones high up. The principles being inadmissible, the deductions arising from them are not less so, inasmuch as they tend to aggravate the disease mechanically. The use of the bar-shoe is likewise an injudicious practice, for it tends to compress those parts where compression should be particularly avoided. Lastly, I cannot approve of the taking of such large quantities of blood: small bleedings often repeated would, in my opinion, be much more advantageous; nor am I more satisfied with the cutting away of the inner quarter, as compression might be avoided by means of a less painful course of proceeding.

Goodwin commences his treatment by a general bleeding and purging; he then envelops the hoof in a linseed-meal poultice, and leaves the horse to perfect rest in a large stable. Where the disease is of recent date, he states that this mode of treatment cures nineteen horses out of twenty. Should it prove insufficient, he has recourse to bleeding from the toe, and keeps the hoof short and the horn soft by means of emollient poultices; and where this course of treatment is found to fail, he has applied a blister round the coronet with great success. He objects, and with reason, to the great bleedings practised by Turner, to the cutting away of the inner quarter, and to the exercise; but he is wrong in disapproving of the paring out of the sole, as I shall presently prove.

Beside these two modes of treatment, which have been adopted by numerous veterinary surgeons, and variously modified by them, neurotomy, and the passing of a seton through the frog, have been prescribed.

In general, the seton is applied at all and any of the stages of podotrocholitis: some persons make use of it at the commencement of the disease; others do not try it until they have found antiphlogistics and other means fail; and there are some who rely upon the beneficial effects of a seton to produce a cure even when the disease has attained its highest degree of intensity. Nor is the seton without its opponents; Turner, for instance, denounces it on account of the local pain which it occasions in the heels: the horse endeavouring to spare these parts, the depression of the navicular bone becomes inevitable. If the seton be not altogether useless in the treatment of chronic podotrocholitis, if the reasons urged by Turner do plead somewhat in its favour, it is still certain that, applied to parts rather deficient in sensibility, and the reaction of which is weak, its revulsive effects must be very limited; for the inflammation excited by the seton in the ligamentous apparatus

never attains sufficient height to counteract that already developed in the trochlea. Admitting, however, that this effect may be produced in cases of recent podotrocholitis, experience testifies that no confidence whatever can be placed in the efficacy of the seton where the disease is of long standing, and the consequences of inflammation have already begun to manifest themselves.

Opinions are divided as to who it was that first applied the operation of neurotomy as a therapeutic agent against chronic podotrocholitis: some have attributed the priority to Coleman and Sewell, while Moorcroft claims it for himself. He says that he at first tried to open the pastern arteries, but, that that operation not having answered his wishes, he thought of cutting through the nerve which passes along the side of the metacarpus. Having remarked that the lameness reappeared after the lapse of a few weeks, he modified his proceedings, and, instead of a simple division, made a section, and cut off a quarter of an inch of the nervous cord. This latter mode of proceeding was, for a certain period, quite the fashion in England, as well as elsewhere, but it frequently happened that the lameness continued after the operation had been performed: this was remedied by cutting both the pastern nerves with loss of substance. Most satisfactory results were thus obtained; the horses ceased to limp: but still it not unfrequently happened that there was reason to regret that recourse had been had to this operation, on account of its inducing a total cessation of *all* nervous influence in the foot. Sewell consequently proposed that the operation should be performed on the *posterior division* beneath the articulation of the fetlock.

The two last mentioned modes of proceeding are still practised; and notwithstanding the length of time that has elapsed since neurotomy was first introduced into veterinary surgery as a means of curing chronic podotrocholitis, and the thousands of times that this operation has been performed, the most opposite opinions still prevail as to its value, and to the best method of performing it. The operation should be regarded in a *physiological* point of view, for thus alone can we learn properly how to appreciate it: hitherto physiology has been too much neglected.

The consequence of neurotomy is an immediate cessation of the nervous action, and an interception of the sensation of those parts to which the divided nerves proceeded; hence the pain which prevailed there ceases. If the plantar nerves are cut through, the horse presses the foot that has been operated on firmly upon the ground, and, should the enervation be perfectly accomplished, that pressure is greater than it would naturally have been. Hence it follows that the compression and friction of the trochlea are no longer felt, although these parts still continue to be the seat of dis-

ease and alteration of structure. In point of fact, the mechanical mischief increases instead of diminishes, the disease spreads, and all hopes of effecting a radical cure become extinguished.

Such are the consequences of neurotomy. The diminution, or total cessation, however, of nervous sensibility too frequently occasions very serious accidents. The fracture of the navicular and coffin-bones, of which I have myself seen one case; rupture of the perforans, seen by both Dick and Turner*, and that too immediately after the operation; extension of this tendon, witnessed by Castley† several months after the operation; all these belong to the serious consequences of neurotomy. The most frequent accident resulting from the operation of neurotomy, and one which I have often had the opportunity of observing, is shedding of the hoof. I read in Villate's work‡, that Sewell himself admits that he has seen this occur in as many as six or seven cases out of ten.

[To be continued.]

A CASE OF LAMENESS.

By E. N. GABRIEL, *M.R.C.S. and R.C.V.S.*

Hippophilus.—"You have delivered yourself very well; but yet, *Hipposerus* (but yet) I am to seek to know and understand when I see a horse doth halt or complain, where the grief lieth, being a thing most needful for a gentleman to be very perfect in, but more especially for him that is a farrier, who is to cure and set upright the horse that is lame."

Hipposerus.—"You speak pure truth, sir, and therefore I will give you such assured rudiments whereby you shall not at any time fail in the discovery of the least lameness that shall proffer itself to your eye, if you will be pleased diligently to observe my documents. You must, therefore, first understand, that if he do halt before, his grief must of necessity be either in the shoulder or knee, or in the shank, or in the pastern, or in the footand thus much for lameness and halting before.....Now, you perceiving your horse to halt, and that you be assured that his lameness is not before, then may you be confident it must be behind."

De Grey, 1684.

Would that it had been my good fortune, during the days of my noviciate, to have met with such a mentor as *Hipposerus*, to have afforded me information so invaluable as that which would

* The *VETERINARIAN* for 1830.

† The *VETERINARIAN*, vol. ii, p. 88.

‡ *Recueil de Médecine Vétérinaire*, 1828, p. 401.

have enabled me to have at no time failed in the discovery of the least lameness that presented itself to my eye, how many a tedious and unsatisfactory an examination would have been spared me; how many an after-hour of anxious thought would it have saved me, and how many a time would the humiliating acknowledgment have been avoided of ignorance of "where the grief lieth," when its consequence, the lameness itself, has been but too palpable to all around: and if there be any of my professional brethren who may venture to remark that they have never met with this galling annoyance, why possibly I may "bite my thumb;" and then, should either of them ask, "Do you bite your thumb at me, sir?" I may, for the love of peace, reply, "No, sir, I do not bite my thumb at you, sir; but I bite my thumb, sir." Whip me your Sir Oracles, say I, who by pomposity of speech and verbosity of language think to hide the want of discrimination and decision of opinion, who are never in the wrong, inasmuch as they always take care to leave a loop-hole, not, indeed, "so deep as a well, nor so wide as a church-door," but still large enough to enable them to meet either side of the question, and say, yea, yea, or nay, nay, as the result may require. The goddess of ambiguity is the deity they worship, that being to them mentally what sleep was to the immortal Sancho corporeally; and well may they exclaim with him, "God Almighty's blessing on the man who invented it; for it covers one ('s opinions) all over, just like a cloak." Show me a man—to use a favourite mode of expression of our late talented Professor—who will give a decided opinion on a case he understands, or candidly states his doubts when he does not clearly see his way before him, and I will show you a man whose opinion you may safely rely on, for it has both judgment and honesty to recommend it.

And do not, I pray you, let the last part of the opinion of the worthy Hipposerus be too much despised; for although at the first glance it may appear too much like one of those self-evident truths which we all imagine we intuitively comprehend, that if a horse is lame, and the lameness is not in the fore-leg, ergo, it must be in the hind; yet, on more mature consideration, it may be found a practical axiom well worth remembering.

It was during the very green and early period of my professional career that I was called on by a military officer of some rank to see his horse, because he would not feed. I, well pleased with the summons, promptly attended, recalling to my mind, in order to have them at my fingers' ends at the proper moment, the various causes that might have produced such a fearful calamity. On examination, I found an animal as fat and phlethoric as the most staunch exhibitor at Smithfield could have desired, having somewhere about four or

five hours' very moderate work to do per week, and, by possibility, when the weather was fine, and the groom disposed to take an airing, as many more of exercise. The horse was lively, his coat lay well, and the evacuations were normal: his pulse was quiet, and his respiration tranquil; and on having a handful of corn thrown into the manger, he ate it heartily: the sum total of the unfavourable symptoms was, that sometimes he did not clear his rack and manger by the morning, and now and then failed to do so in the middle of the day. I then waited on the owner, and, in the simplicity of my heart and the greenness of my inexperience, told him that I did not detect any disease about the animal, and that if his exercise was increased and his feeds diminished, I had no doubt he would soon be as hearty as ever. About a week after, the gallant officer called on the medical friend who had named me, to express his surprise at his having recommended a practitioner so incompetent that he could not detect the disease under which his horse was suffering, when, on consulting another person, the case had been clearly made out, and a course of treatment decided on, from which the patient was already much better. Now, had I had the *nouse* then—may-be I have acquired it since—to have asserted that if the cause was not in the fore part of the digestive organs it must certainly be in the hind, why I should have secured a good patient, and probably been extolled as a very discriminating and intelligent practitioner. My worthy friend wound up his account of the interview with the following valuable remark:—"Take it for granted, my dear sir, that our patients, as well as the owners of yours, have decidedly made up their minds that they are ill before they require our assistance, and therefore when they do require it, in God's name let them have it." It is now many, very many years since this excellent piece of advice was given; and I do declare, upon my reputation, that, with the exception of one or two weak moments, I have invariably acted on it since. Therefore, again I say, let not the last sentence of my quotation be too contemptuously passed by.

On Sunday evening, Nov. 22d, an aged bay gelding, which had been for some years in the possession of his owner. was being driven, somewhat about the rate of five or six miles an hour, along the Hammersmith road, a perfect level, in the phaeton in which he usually worked, when, without any premonitory notice, without the slightest stumble or halt, he suddenly stopped. The coachman, fancying something might be amiss with the harness, immediately got down. Nothing of the sort, however, was perceptible; and, on endeavouring to move the animal, it was found that nothing could induce him to draw the carriage another step. He was at once taken out; and on again attempting to move him,

him, it was discovered he went on three legs. With the greatest difficulty, and the constant use of the whip, he was led to a stable about fifty yards off. A farrier was sent for, the shoe taken off, and the foot carefully examined, but without any cause for the lameness being perceptible. Some blood was taken from him, and a diuretic ball administered, our vulcanian cotemporary halting between the hip and the hock, as the seat of the lameness. I saw him on the Monday morning: he was in great pain—had not moved during the night—was standing on three legs, the near hind one being entirely raised from the ground—his pulse was quick, and his appetite quite gone. A very careful examination could discover nothing more than a general fulness of the limb from the hip to below the stifle, with considerable tenderness on pressure; when compelled to move, however, he could place his full weight on the affected leg, although with great pain and reluctance. During the examination, while flinching from the pressure made on the tender part of the limb, he fell on the near side, but, after a few struggles, again recovered his legs. After this he was led a few steps in the yard; and as the testimony of all around was, that he moved rather better than he did the night before, he was ordered to be led quietly to town. Soon after he reached his stable, which was not till the evening, he either fell or lay down on the off-side, in which position I found him on Tuesday morning. I had the hobbles put on him, and then releasing the limb affected, examined it in every possible way: it was flexed and extended, abducted and adducted, without any lesion or other cause for the extreme pain and lameness under which he was suffering being discernible. On being released, he was so exhausted that he would not make the slightest effort to rise; and it was the labour of more than an hour, with the assistance of pullies and several men, after repeated falls on either side, that he was got on his legs. A dose of aloes and opium was given; a cold lotion was frequently applied to the quarter, and perfect quiet ordered.

On Wednesday the medicine and lotion were repeated: he was led a few yards from his stable and back, when it was observable that, although he could flex and extend the limb tolerably well, its lateral action was much less under his controul, as he evidently could not depend on placing it within a foot further from or nearer to him: his medicine is operating well, and he not in quite so much pain. A consultation to-day failed to elucidate any decided opinion on the case; but a peculiar dull sound was noticed in the hip-joint.

On Thursday, a third opinion was taken, and this was, that the case was a fracture of the head of the femur, without displacement; but as the owner wished every possible chance to be given, the

horse should be placed in slings, the cold lotion assiduously applied to the quarter, and the state of the bowels attended to. This was persisted in for some days, during which our patient stood as much on the lame leg as the other: his appetite returned, his pulse became quiet, his carcass began to drop, and the first stage of suffering subsided favourably.

During the ensuing week the slings were removed occasionally, and the patient gently moved; and pressure on the hip-joint now distinctly produced a cup-and-ball sound, as if the head of the femur was moveable in and out of the acetabulum. This sound, and the total absence of crepitus, led me to the opinion that a rupture of the ligamentum teres had taken place. Now it will be perceived why I was so anxious to have an Hipposerus to rely on; for here is an animal so lame in the near hind-leg, that he can scarcely make a walk of it—when he raises the leg, does not know whether he will put it down again within a third of a yard to or from him; and yet three professional men, after careful examinations, agree to differ to the extent—of a fracture of the head of the femur—a rupture of the ligamentum teres—and no lesion at all, but a relaxation of the hip-joint and the round ligament.

On commencing this paper, I fully expected to have been enabled to have given the post-mortem account of the case; but so anxious is the owner that every chance should be given, that the horse is still kept on; his general health as good as ever, free from pain when at rest, reposing in his slings at night, and moving about his loose box by day. A blister over the hip-joint has not produced any change, and we must be content to wait till some very decided change takes place or the patience of the owner is exhausted, to penetrate the obscurity which has hitherto enveloped this case of lameness.

THE VETERINARIAN, JANUARY 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

THE beginning of a new year naturally turns our thoughts back on that which is past, as well as forward on that which is to come. If any thing can compensate for the loss of the year gone by, it is having made the best use we could of its days and hours while they were present, this likewise constitutes as good an

earnest as we can give of turning to the best account we can the year before us. As veterinary journalists, some considerable portion of our year is necessarily occupied in writing and catering for our Journal. Whether in this character we have performed our part well or ill, must be left to our "constant readers" to determine. All that we can say—dare say—for ourselves is, that we have *essayed* so to do.

Licet omnibus, licitum est etiam nobis, dignitatem artis veterinariæ tueri.

If any part of our duty has proved difficult or trying to us, it has been that of holding with a steady hand the scales of party. The Charter, of which so much—such great—good was augured, has, unfortunately, thrown the veterinary profession—neither to be called united nor disunited before that Charter was granted—into a state of schism, which it were idle for us, or any power so weak, to pretend to "bandy with," so long as our corporate constitution remains uncemented by that authority from which we received it. So long as such parties as feel their privileges trenched upon by the Charter, their power and emoluments abridged by it, are, so far from being given to understand that it is their duty to conform to it, encouraged in their opposition to it by hopes of obtaining Charters for themselves, so long must dissension reign in the veterinary community. Sooner or later, the State, who, it is to be presumed, not without due deliberation, honoured the veterinary body with a Charter of Incorporation, must see the necessity of putting an end to this distracted condition of its members by enforcing obedience to it through peremptory refusal to grant other charters: or should it so in their wisdom seem meet to them, by conferring additional charters upon the discontents, must throw the body into convulsions of a still more divided character, and so, root and branch, tear up the constitution they are at present in possession of. How very gratifying it must be to the "governors" and "directors" of veterinary institutions to behold the professors of the "art" which they foster, or are represented to foster, in such a delectable state of segregation! Science can hardly flourish in the midst of such dissension; and as for those who are on their way to entrance into such a profession, their only prospect is to take up arms the moment they have entered the Royal Chartered Col-

lege, and declare themselves at once either for the schools or for the body of the profession.

We are sorry we cannot present our readers with a picture marked with less agitation and opposition of the transactions of the year now passed: we would we could hold out to them the cheering prospects of peace and union for the year to come. We are not, however, going to indulge in any idle prophecies—to meet evil half-way; we are not, indeed, going to say one syllable about the new year before we have settled our account with the old. And a very bad settlement we feel—sensibly feel—we should make of it, were we not, honestly and heartily, to proffer our thanks to those friends who have lent us a helping hand in our monthly labours. There have been times when we have had unpleasing work, times when we have had rough work, to do; with the kind aid of friends, however, we have managed to get through it all, and if to their satisfaction, no less to our own. We feel a monstrous desire here to make the only little return to those good friends it is in our power to make them, viz. to honourably name them, one by one, and record their merit; afraid, however, lest in so doing we might arouse feelings it would hurt us even for a moment to reflect upon, our pen refuses this part of its office. We will, however, thank them, one and all, again and again, for their kind and liberal support.

A novel feature in our Journal for the year 1846 has been the publication of the sayings and doings of our Council. Our situation in the Council, and the delicacy—perhaps false—arising out of this, debarred us, for a long time, from such publication; when, however, we found a newspaper (the Era) printing such transactions, of course our own hands became untied, and we immediately determined on furnishing our readers with all and every information relative thereto in our power. To what extent we have acted up to this determination, our reports of the “Sittings in Council” will best shew.

That our members of Council—at least the metropolitan members thereof—have done their duty—diligently, unremittingly, zealously done it, the reports of those present at the “Sittings,” will satisfactorily testify. Men out of the Council may deem it a monstrous pleasant thing to walk two or three miles, or ride eight

or ten, after dark and day's work is over, in wet weather or dry, twice or thrice a month, to the Freemasons' Tavern, to debate on this or that point of the Charter, or on this or that of the by-laws; and probably, at the commencement of the business, while things were new and fresh, it did prove an agreeable way enough of spending an evening: when, however, novelty comes to wear off, old matters come to be again and again mooted, jarring opinions given, sour remarks made; and moreover, when letter after letter comes to be received by the Council, finding fault with all they have done—when, we repeat, affairs come to take turns like these, the agreeableness of the meeting is apt to become changed, so much changed indeed that, were it not for a stern and moral sense of *duty*, members of Council, perhaps, would not be found with that regularity in their places which they now are. And, therefore, we say—as we have said before—that the profession are much indebted to their working brothers, the members of Council.

Our great Metropolitan Cattle Show, which for many years past has been a theme of pride and praise throughout the length and breadth of the United Kingdom, has within this last year or two been rather severely commented on by our great oracle of the day, *The Times* newspaper; while another of our leading journals—the *Morning Chronicle*—still upholds its character for national greatness and utility. Last year *The Times* commented on the show in such passages as follow:—"The cattle show is somewhat of an enigma to us; for, though we can probably comprehend the British feeling which brings people together to eat, and drink, and hear dull speeches, we do not see any real advantage that is derived from subjecting the cattle to the same process."—"Presuming *bulk* to be the only good point in an animal, these exhibitions would assuredly be very beneficial, for never, until these annual shows were established, had oxen, sheep, and pigs attained to any thing like their present obesity." This seems to constitute "the alleged improvement of the Duke of Richmond, and others, in the breed of stock; to us, however, "perfection of breeding" appears to consist "IN PRODUCING THE GREATEST POSSIBLE AMOUNT OF FOOD OF THE BEST POSSIBLE DESCRIPTION AT THE LOWEST POSSIBLE COST." "The system pursued by the Smith-

field Club results in yielding the least proportionable quantity of meat of the coarsest and most unprofitable description by means of the most extravagant outlay."

The same paper, for the present year (*The Times*, for Dec. 10th last), in an editorial article following up the same subject, asks the question, "Will any body prove to us, by any rational considerations acknowledged in the ordinary business of life, that the Christmas Cattle Show, with its disagreeable consequences, *does any real good?*"—"To be worth any thing as an useful experiment, every fat beast ought to have a ledger, with a debtor and creditor account, hanging to its neck; what the cost of the grass, hay, barley and bean-meal, carrots, mangold-wurtzel, cabbages, Swedes, pea-meal, oats, vetches, &c., the animal has devoured; as also of its stabling, littering, and cleaning; as also its journey per rail, water, or van to the market: on the other side, what is the actual value of the product?"—"All that we have heard proves to us that it is an expensive hobby, even though people can be found silly enough to give the price of good food for material fit for nothing but kitchen candles."

THE MORNING CHRONICLE of the 16th ult. makes the following reply to the above criticisms:—"A person should know something of the object of these exhibitions before he ventures to criticise them. Every one acquainted with farm stock knows one animal feeds more kindly than another, and that an ox or a sheep of particular breeds will, on the same quantity of food, make much more flesh than an ox or sheep of another breed. The disposition to fatten is the test of a good breed. Some fatten so easily, that they hardly require to be put up. This is the case in particular with the black kylo of the West Highlands of Scotland. The kylo is of so kindly a nature that it will fatten on any decent pasture, and it will perhaps make more flesh on the same quantity of food than any other ox. The reason why the Yorkshire cows are such favourites with the cow-feeders of London is, that they are both good milkers and good feeders, and that soon after milking is over they can be put into a fit condition for the shambles."

"The farmer does not suppose, when he succeeds in giving to an ox the weight of a Durham, or any other monstrosity of fat, that a delicate stomach can digest the meat from it. He only

selects one or two animals from his flock for the experiment of excessive fattening. He and his brother farmers are anxious to obtain the breed that will be most profitable; and as the disposition to fatten is the test of a good breed, the prizes are offered for the animals that are not only the heaviest, but have the fat laid on in the best proportions, in order that individuals may be stimulated, not only by the money value of the prizes, but by the reputation they acquire to display their utmost skill in breeding, and that the whole farming world may profit by their efforts."

"In this country there are several breeds of cattle that are favourites with the farmers; but the three breeds that bear away the bell are the short horns (i. e. the Teesdale), the Herefords, and the Devons. The late Earl Spencer stood out for short horns; but of late the Herefords seem rather to be in the ascendant. An immense deal of care and pains have been bestowed by breeders in bringing those kinds to the degree of perfection they now possess. In no one thing has the skill of the British farmer been more conspicuous than in his improvement of breeds. The most eminent medical men have not deemed it beneath them to devote their knowledge to this subject. Mr. Cline, the well-known surgeon, published a volume on the properties of oxen which best adapt them for fattening. Another surgeon of great reputation, Mr. Benjamin Bell, of Edinburgh, also devoted his attention to this subject."

The question of the utility of a Cattle Show, in a national point of view, is one of such extensive scope and bearing, that it will hardly admit of being anywise satisfactorily settled save by men of great experience as graziers and farmers, and who are old enough to remember the times when no such shows existed.

If shows of the kind have hitherto been instrumental in improving the breeds of cattle, and sheep, and swine, we see no reason why they should cease so to be; seeing that, however much improved our breeds may have become, there is yet room enough for further improvement. That, simply as an exhibition of *fat* cattle, from its year-after-year sameness, the Show must in time lose—if it has not already lost—more or less of its attractiveness, is quite certain: people will no more go for many years longer to see such a phenomenon as an ox too fat to travel, or a pig too fat to stand or to breathe, than they will go to see, more than once or

twice, Tom Thumbs or American horses. But it is not taking legitimate views of these fat prodigies to say they were made so fat for the single purpose of exhibition, much less for the mercantile one of being sold at a price for food or candles. The object of exhibition clearly is, to prove that an animal of such a breed is by such and such food and treatment *capable* of being brought to the exhibited state of perfection as regards fatness. To what this leads, or what practical deductions are to be drawn from it, is another question. Should the same breed of animal which has proved capable of being made, at so much cost and care, over-fat by the aristocratic exhibitor turn out to be such an one as would not repay the less wealthy stock-owner or the poor man for his feeding, we should say, so far as that experiment went, that it was a failure or not worth the making. What the cottager wants is a pig that will live on nothing and get fat on any thing. Nor is the farmer or feeder satisfied unless his stall-fed ox turn out such, either in quantity or quality, or both, as will amply repay him for first cost and for feeding. For these reasons, for our own part, we should like to see—what *The Times* has suggested—a debtor and creditor account tacked to every fatted beast; the merit being not so much in the quantity of fat or of flesh, as in the comparative *cost* at which such fat or flesh has been produced.

BREED and SYMMETRY, in animals raised for food, can have in the end no other useful tendency but this; and as symmetry is nothing more than the perfection of breed, the two considerations merge into one. Breeds form themselves under the influence of countries, soil, pasture, climate, &c., and are improved by cultivation; and it is a great point to gain to suit the breed to the locality or country. Herefordshire oxen would be as much out of their place on the Welsh mountains as Welsh kine in the rich pastures of Herefordshire. So a cow or a pig may be very good property for a rich man, and yet very unprofitable to a poor man. These are matters which the Cattle Show might endeavour to set forth.

The grand error our cattle exhibitors appear to have fallen into, if *we* might be allowed to express an opinion on the matter, seems to us to be, that, vying with one another, they have, regardless of expense, been trying who of them could load the animal's body

with the largest amount of fat; when their object, as we think ourselves, ought rather to have been, to shew that such and such animals were capable of being made fat—fat enough at least for food—at *a less cost* than others of their species of a different breed. Here would have been shewn a practical good, from which a poor man as well as a rich man might have taken an useful lesson. In this case animals would not, on account of the expense, have been made so fat as they are now: there would have been more flesh or lean with the fat, and so the carcass would have been in a more edible and consequently in a more saleable condition. In the gross and blubbery state of fatness in which the animals for the most part now appear at the Show, it seems to us that they *prove too much*,—they prove that they have cost more than they are worth! And whatever opinions or speculations those who go to view them may form concerning their aptitude or disposition to grow fat, the fact of more money having been expended on them than their sale will repay, stands awkwardly forward. Hence arises a disadvantage from making the show cattle so superfluously fat.

Anatomical researches teach us that, as fat increases, *muscle* or flesh decreases, shewing that we lose one way—though not to the same amount—what we gain in another; and this process of substitution may go on, as the over-fatted carcass demonstrates to us, until the happy climax is reached of having produced such a mountain of living *adepts* as will surely fetch a prize at the Show. A stall-fed ox is kept while being fattened in a state of rest or inaction, exercise being deemed—if not proved—to be a drawback on the process of fat-making. Pigs fattening in their styes will take no exercise after a certain advance to fatness: they will lie and sleep all day long, arousing themselves only at such times as fresh food is given them, or as they feel hungry. Although such confinement, however, may be most conducive to the accumulation of fat in the body of the animal, we very much doubt that the best or most grateful and wholesome meat is produced under this total absence of exercise or locomotion. The most prized beef we know to be that obtained from the ox that has been for a length of time at work, drawing cart or plough. The primest mutton comes from the six or seven-year-old wether sheep. Barn-door fowls are better eating than

such as have been up cramming. Turkeys the same. Facts such as these appear to point out to us the impolicy of keeping in a state of immoveable confinement our fattening animals: were they kept in places where, along with the required warmth and exclusion, they could take a little exercise, we are of opinion their meat might prove of better quality, while the fattening process might not thereby be either protracted or delayed. What the butchers estimate most is the *marble* beef, as they call it—the interlarding of the fat with the lean; and this, we are of opinion, would be best insured by allowing the beast, up at fat, space sufficient to take moderate exercise.

By this time the members of the profession have read and digested the Memorial of the President and Council of the Royal College of Veterinary Surgeons to the Right Honourable Sir George Grey, as contained in our impression for last month. It having been sent to us for insertion with a request that we would refrain from comment on it, we printed it without remark: a month, however, having since elapsed, and an answer to the Memorial having in the interim been received, we imagine we are now at liberty to have our say on the matter.

With the Memorial itself we are well pleased. In plain but forcible language it sets forth the ameliorations made in “the conditions of the veterinary profession;” 1st, by the reform of the Examining Committees both of London and Edinburgh, a reform which has been followed by improved systems of education in the respective schools:—2dly, by framing a code of by-laws, by virtue of which something like form and substance has been given to an “airy nothing.” And all this, and more, the Council have brought to pass, not in secret conclave, but in open committee, in rooms whose doors have been unlocked to the profession, and, moreover, have published their proceedings, month after month, in the pages of *THE VETERINARIAN*. To which proceedings—or at least to such resolutions and laws as have arisen out of them—the Council have the satisfaction of adding no demur or objection has been made by the profession at large; none, in fact, whatever has reached them save from quarters where, in the language of the Memorial, “the circumstance justifies little surprise.”

This is a goodly account—a “true bill”—a “shot that will tell;” though we are sore afraid we have fired our “great gun” *too soon*. No doubt the Council had good and sufficient reasons for “being fully aware that *application had been made* for a new charter to grant authority over the veterinary profession:” but what says Sir George Grey to this? Let us read his reply to the Memorial:—

“Whitehall, 10th November, 1846.

“SIR,—I am directed by Secretary Sir George Grey to acknowledge the receipt of your letter of the 4th instant, transmitting a Memorial from the President and Council of the Royal College of Veterinary Surgeons; and I am to inform you that no formal application has been yet addressed to Sir George Grey for a new charter from the Royal Veterinary College since the proceedings referred to in your letter of the 5th September; and that, in the event of his receiving such an application, a communication will be made to the Royal College of Veterinary Surgeons before it is granted.

“I am, Sir,

“Your obedient servant,

(Signed)

“S. M. PHILLIPS.

“Thomas Turner, Esq., President of the
Royal College of Veterinary Surgeons,
311, Regent-street.”

Sir George, then, informs the Council “that *no* FORMAL application has been yet addressed to HIM (Sir George) for a new Charter *from the Royal Veterinary College* SINCE the proceedings referred to,” &c.; nor we should hope—for the addressers’ sake at least—will any “formal” application be addressed to him: only, supposing such a thing were to take place—the Council “being aware” that some such thing *has* happened before—and supposing that such renewed or “formal” application should be referred or intimated by Sir George to the Council, where, we should like to know, are the Council to find a greater gun to oppose it with than the one they have already fired;—one on which, as it would appear to us, they have expended all, or nearly all, their powder and shot? And the same powder and shot will not answer a second time. The sending of the Memorial *may* prevent all this. We are only putting the case, lest it should not. To conclude, we

therefore repeat, the Memorial of itself, as a composition and a reply to all present inquiries, is capital—undeniable: only, should any further remonstrance on the part of the Council be required, we should like to be informed whence the materials for its composition are to be derived, and in what its paramount force over the former Memorial is to consist.

MISCELLANEA.

FEEDING OF ANIMALS.

THE identity of composition and properties which seems to exist between certain substances derived from the animal and vegetable kingdom leads naturally to the notion, that animals do not originate the substances which enter into their organization, but that they find them already formed in their food. Whence we must conclude that many vegetable principles are assimilated directly by herbivorous animals, without being subjected to any great modification; and that the elements of animal fluids and tissues pre-exist in vegetables, which contain, besides, the earthy phosphates which form the base of bone. The food of herbivorous animals must then always, and in fact does always, contain four essential principles which by their union constitute their normal nutriment, viz. :—

1. An azotized substance, such as albumen, caseine, or gluten; this is probably the origin of flesh.
2. An oily matter, or at least one approaching to the nature of fat.
3. Some substance of a ternary composition, as sugar, gum, or starch.
4. Salts, especially phosphates of lime, magnesia, or iron.

This complication of elements, which must necessarily enter into the composition of a plant fit for fodder, justifies the general notions put forth by Dr. Prout on the subject of nutriment. This able chemist shewed milk to be the normal nutritious substance, and that any proper system of food must partake more or less of its constituent qualities; that is, that it must contain, independently of phosphates, some azotized substance, an unazotized principle, and a fatty substance to replace the caseine, sugar, and butter. The fundamental principle—that animals find their proper substance already formed in the food by which they are nourished—may enlighten the practical man in the feeding of herbivorous animals; for, if the flesh, the fat, and bones exist, at least in essence, ready formed in their food, that must

clearly be the most suitable which in the same weight contains the greatest quantity of these substances. The exact appreciation of the azotized substances, such as gluten and albumen, is not without difficulty; it requires much time and care. But if it is once admitted that the nutritive value of food increases in proportion as they increase, it is clear that this amounts to the same thing, with the value being proportional to the quantity of azote it contains. The quantity of azote is easily ascertained, whereas the appreciation of the albumen and gluten requires much tedious manipulation. The proportion of azote being once known, it is easy to calculate the amount of albumen (or flesh) contained in any given food; for, in general, vegetable nutriment does not contain any other azotized principle. It is true, all azotized vegetable principles cannot be considered as nutritious. Some are violent poisons, or active medicines; but these poisonous matters are not met with in any appreciable quantity in such plants as are used for nutriment; and, indeed, when once any particular plant is admitted as an article of food for animals, we may assume the absence of any injurious principle. All vegetable substances which are used for the food of herbivorous animals, as far as they have been at present examined, contain, in point of fact, a certain quantity of azotized constituents. We know from the researches of Dr. Magendie, that food void of azote will not support life. Animals subjected to such a regimen lose their condition, and at last die. On the other hand, we know that the value of any kind of flour increases with the gluten it contains. It is because the seeds of leguminous plants, such as kidney-beans, peas, beans, &c., are richer in azotized principles (that is in flesh) than corn, that they are also more nutritious.

From all these considerations, I have admitted that the nutritive quality of vegetables depends mainly on their azotized constituents, and that in consequence their nutritive quality is proportional to the quantity of azote which they contain. It must, however, be remarked that I am far from thinking that azotized substances are sufficient for nutriment, but it is matter of fact that any vegetable nutriment highly azotized is, in general, accompanied by the other organic and inorganic principles which concur in the act of nutrition. In estimating the azote of many kinds of food, I have tried to find a base to serve as a fixed point for appreciating comparatively their nutritious qualities. The agriculturists of Germany and England have long tried to solve this important problem of rural economy. It is with this view that Thaer and others have given, as the result of their researches, numbers to express in weight the proportion in which one kind of food may be substituted for another: they indicate, for example, that a given quantity of hay or roots may be replaced by another of leaves or grains to nourish

in the same proportion an ox for market, or a horse for the field. The nutritive equivalents are, however, very differently stated; and this could hardly have been otherwise, as the conditions under which these equivalents were estimated could scarcely have been precisely similar; and the difference will surprise those only who are not acquainted with the difficulty of the subject. It is probable that this must be sometimes attributed to the relatively moist or dry condition of the substance in question. The nature of the soil, a wet season, climate, &c., may be considered as so many causes affecting the quantity of water contained, or the nutritive quality. Far more useful results would be obtained by first determining the quantity of moisture contained, or, in other words, by estimating the nutritive equivalents of bodies previously completely divested of moisture. The equivalents thus obtained are often very near those furnished by direct observations, and I may add that the data of theory have been sanctioned by experience.

Preliminary Observation, Boussingault, vol. ii, p. 385.

BREEDING CATTLE.

To such as intend to breed cattle of decided excellence—and they, we hope, constitute all—we recommend them to select bulls of only moderate size, coupled with all the fineness of bone and limb consistent with a proper masculine vigour and energy, likewise with fulness of carcass and ripeness of points, so as to embody great substance within small compass. In addition to this, let him be as deeply bred, that is, of as pure blood and of as long ancestry (not depending altogether on the herd-book for that, as many of the very best class of animals have comparatively short herd-book pedigrees) as possible; and, above all, let him be descended of good milking stock, where milkers are to be bred in his progeny. Your cows, we will presume, are such as your opportunities have enabled you to procure, but of approved blood. If the bull selected breed well to your cows, have no fears of continuing his services to a second or even a third generation of his own get. Such practice will produce uniformity, and uniformity is one great excellence. No matter for the colour, so that it be within the short-horn colours. Above all things, avoid coarseness, looseness, flabbiness, and a general tendency in the animals to run their valuable points into offal. Such cattle, of whatever breed, are great consumers, bad handlers, light provers, tender of constitution, and unsatisfactory altogether. If you have an occasional production of this sort, transfer it to the shambles or elsewhere with all dispatch. On the principle that “like begets like,” which is an

unerring law of nature in the long run, with the presence of such in your herd, you will be perpetually afflicted with the production of animals, which by hereditary descent, sympathy, and the thousand accidents springing from association, will be neither creditable to your good breeding, nor satisfactory to yourself.

Feed well—not lavishly. Your cows should be in good breeding condition—nothing more; and your bulls in fair working order. Such is the condition most consonant to nature, and promotive of the highest animal health. The scale of points laid down in our introduction, with the occasional remarks on the practice of breeders, as we have passed in our history, detail what a good animal should be. These, together with a close examination of the general figure of good cattle, will aid the judgment of the breeder. With a well-balanced judgment of his own, and a sound experience, they will be a safe guide, and he will go on his way rejoicing.

To breed successfully requires skill, talent, research, observation; and all of these of high order.

American Herd Book.

SYPHILIS IN ANIMALS.

[From the *Lancet*.]

A CORRESPONDENT points out to us an assertion made by M. Crellevier in the *Archives Générales de Médecine*, and reported at page 203 of Dr Ranking's "Abstract," vol. ii, respecting syphilis in the lower animals.

"*Syphilis*.—M. Crellevier has lately performed a series of experiments in order to determine the inoculability of the lower animals with the syphilitic poison. The result of repeated trials upon monkeys, guinea-pigs, &c. appears to be that the disease in question is confined to the human race, as in no instance was the experimenter enabled to communicate the disease."

I believe, from having paid no small attention to the habit of animals, &c. that I am in a position to prove that a disease *analogous to syphilis* afflicting mankind is frequently met with severely affecting and rapidly proving destructive to life among rabbits, &c.

Farriers style it the "foul disease," and by them it is well known to be infectious, and all intercourse by connexion is strictly prohibited. Their remedy is blue ointment both for the male and female rabbits.

In the male, if the disease be not quickly arrested by the application of mercurial ointment, it readily spreads and destroys the penis by ulceration, accompanied by considerable discharge. He soon refuses his food, his coat stands erect, and he withdraws to

the darkened portion of his hutch. He scarcely notices your approach, remaining motionless, with the eyes nearly closed. Soon afterwards the neck, and apparently the head, swells, followed by a discharge of this corroding matter from the nares; and death frequently follows within forty-eight hours after the constitutional symptoms have manifested themselves, and within a fortnight after first contracting the disease.

AN ACCOUNT OF THE ASS.

THE ass is, too generally, a neglected and persecuted tribe. His good qualities are too much undervalued, from being contrasted with those of the horse, without considering the different nature of the treatment—the peculiar care and attention bestowed upon developing the form and cultivating the spirit of the one, and the neglect and ill-usage to which the other is so generally subjected.

The Abbé de la Pluche says that the ass is not master of very shining qualities, but he enjoys such as are more solid. If we resort to other animals for distinguished services, this, at least, furnishes us with such as are exceedingly necessary.

His voice is not melodious, nor his air majestic, nor his manners very lively, but then a fine voice has little merit with persons of good sense. The want of a noble air is compensated by a mild and modest countenance.

He walks with an uniform pace, and, though not remarkably swift, he pursues his journey for a long time, and without intermission. He finishes his work in silence, and evinces no kind of ostentation, which is certainly a considerable recommendation.

His meals require no preparation, for he is contented with the first thistle that presents itself. He does not seem to pretend that any thing is due to him, but thankfully accepts what is offered; and although he may have a relish for the best things, he readily contents himself with the most indifferent. If he happens to be forgotten, or a little too far from his fodder, he entreats his master, in the most pathetic language he can utter, to supply his necessities. It is very just that he should live, and he employs his rhetoric with this view. When he has finished his expostulations, he patiently waits the arrival of a little corn, or a few withered leaves, and the moment he has dispatched his meal he returns to his business, and marches on without murmur or reply. His occupations are necessarily humble, but the judgment that is formed both of the ass and his master is often partial.

Buffon has well observed that the ass is neglected and despised because we possess a more noble animal in the horse. The

horse, he says, is proud, impetuous, and fiery: the ass, on the contrary, is humble, patient, and contented with scanty and coarse fare that other cattle reject. He bears with patience and fortitude the most oppressive treatment.

In Arabia and Persia, instead of being neglected and despised, great care is taken to cultivate the breed by crosses of the best specimens. Charlin says that the asses of Arabia are perhaps the handsomest in the world: their coat is smooth and clean—they carry the head elevated, and have fine and well formed legs, which they throw out gracefully in walking or galloping. They are used only for the saddle, and are imported in vast numbers in Persia, where they are sold again to the noblest men.

A CURIOUS DISCOVERY RESPECTING PROFESSOR COLEMAN.

“AN important discovery has lately been made at Gravesend in the recovery of drowned persons, the particulars of which will immediately be laid before the Humane Society. And a very singular circumstance attended this discovery. Mr. Kite, surgeon, and Mr. Coleman, a young gentleman who chanced to be on a visit at his house, each claim the merit, and have expressed their determination to present separate papers to the Society for obtaining the medals.”—*The Imperial Magazine for September 1789.*

* * * Mr. Kite was a surgeon at Gravesend, to whom Mr. Coleman served his time (of apprenticeship). The “discovery” no doubt has a reference to the subject on which the late Professor Coleman, while in practice as a surgeon, wrote a work entitled an Essay on Suspended Respiration.—ED. VET.

ROYAL AGRICULTURAL SOCIETY.

On Cattle Diseases.

At the monthly Meeting of December 2d, Mr. Fisher Hobbs gave notice, that at the next monthly Council he should move the following resolutions: viz.

1. That the grant of £200 given by the Society annually to the Royal Veterinary College be reduced to £100 per annum.

2. That a prize of £50 be offered by the Society for the best Essay on Pleuro-pneumonia.

3. That a prize of £50 be offered by the Society for the best Essay on the general Diseases of Cattle, Sheep, and Pigs.

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OTHER REMEDIES FOR SPAVIN.

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

[Continued from page 4.]

IT must not be supposed that, because of the paramount efficacy of firing, we are to refuse the aid of other remedies of acknowledged power in certain forms and stages of spavin. The pain the animal is put to, and the length of time he is kept under treatment, by the operation of firing, are sufficient reasons for us not to desire to have recourse to it save in cases of absolute necessity, or wherein there is not the same prospect of affording relief by less severe remedies. The case of spavin I have all along regarded as the one in which we are especially called on to "give the fire" is that which I have designated *articular spavin*, from its essentially consisting in caries of the articular cartilages. The *periosteal spavin*—that external to the joint, and consisting in *exostosis* alone—being, as we have seen, of itself, a totally different disease, will yield to comparatively mild remedies. The confounding of the one disease with the other, or rather of the two together, it is which has given rise to such strange discrepancy of opinion concerning remedies for spavin; one person contending that spavin is a disease easily and always relievable by comparatively mild and painless remedies, while another maintains that firing, and firing alone, can avail. "I can cure spavins with setons," says one practitioner; another, that "blisters" are the things; a third, that "periosteotomy" is all that is required. Paradoxical as it may appear to unprofessional people, it would not be difficult to shew, all were, in a measure, right, and yet that all were wrong; the affirmations being made without any reference to the kind or nature of the disease represented by the name of *spavin*. The

scientific veterinarian will take little heed of such empirical language as this; but will apply himself to the thorough comprehension of the state and stage of the disease he is, under the appellation of "spavin," called on to treat, and apply his remedies accordingly.

Obviously, the important consideration in undertaking the treatment of spavin must, I repeat, be whether the case is actually one of the periosteal or articular description; and by way of assisting the judgment of the young veterinarian in discriminating between the two, it may not be amiss in this place to remind him—1st, That a recent case of spavin, and one occurring for the first time—not a relapse—is, presumably, periosteal; and is with still more reason regarded as such when the exostosis accompanies or precedes the lameness; 2dly, That heat and tenderness in the tumour are evidences of the lameness being referrible to it, and to it alone; 3dly, That, although no tumour or external spavin may be perceptible, we are not, therefore, to set the case down as one of articular disease, since tumour may shortly make its appearance: knowing, as we do, that exostosis or callus may exist in situations where from its being covered by ligament or tendon, or by both, the nicest examination will fail to detect it; 4thly, That spavin in a young—an unbroke—horse is likely to be periosteal; 5thly, That lameness will, under exercise or exertion, abate or disappear when arising from periosteal spavin; whereas, very often, when articular disease is present, the lameness will be increased instead of lessened by motion or work. Appearances and circumstances the reverse of these will dispose us to regard the case as articular; at the same time, it must be borne in mind that it is, indeed, very problematical whether such a case as *pure* or uncombined articular spavin ever exists. My opinion, as before expressed, is, that the disease outside gives rise to the disease inside the hock joint;—that the two have a pathological connexion, and, whenever the latter is present, a simultaneous existence. Chronic or inveterate lameness—lameness that has existed for a length of time, the horse having the while been kept at work; relapse upon relapse of lameness, and the patient aged; are all circumstances favouring the presence of the compound spavin. For this case, as we have seen, firing is the remedy; and the firing, to produce its utmost effect, must be, I again say, both extensive and severe. In fact, the owner of such a horse, should he expect a cure to be performed, must make up his mind to consent to a course of treatment which cannot but necessarily occupy some months. Should there lurk any doubt about the case, that it calls for the adoption of such strong measures as these, or there be any disinclination to adopt them, or should the case clearly be

one of periosteal or ligamentous disease, then we may turn our attention to some less violent remedy, and none is more worthy of our notice than

SETON.

It is hardly necessary for me to observe here, that, whatever notion change of name may carry with it into some minds, a seton is nothing more than a rowel thrown into an oblong or linear form, and that the effect of either will be in the ratio of the extent of superficies it occupies or passes over; the one or the other being ordinarily employed in practice according as the skin is loose or tense over the part in a state of disease. In pulmonic affections, for example, we insert rowels or plugs into the breast; but through the sides we introduce setons, the skin upon the latter being so tense as with difficulty to admit of being rowelled. And for the same reason, in cases of spavin, wherein we desire to employ counter-issue of this description, we prefer seton to rowel. So much, however, has been said about the efficacy of seton in spavin—such extravagant sort of praise, by Professor Sewell in particular, indulged in on the subject, carrying its sanative power in such cases even beyond that of the actual cautery—that I verily believe some of the juniors and less experienced of our profession have felt disposed to attach a *specific* power to the seton as a remedy. That setons are often found of great service in spavin, that in certain cases, and under particular circumstances, they prove relievable or even curative of spavin, I am, from my own practice, too well convinced to listen to any opinions to the contrary; but, that they possess any remedial power in confirmed or inveterate cases of spavin which will bear a comparison with that belonging to the firing-iron, is what no man who has had to treat many such cases, I should imagine, will subscribe to. Spavin, it must ever be borne in mind, essentially consists of two diseases; and these diseases are so opposite in their nature, that to make a selection of any individual remedy, and say, it is equally applicable to both of them, in any state or stage they may happen to be, is downright quackery, and nothing better.

For *articular spavin*, then—if our design be to work a cure that will prove serviceable and lasting—the actual cautery is, generally speaking, the preferable remedy. But for callous tumour or exostosis, i. e. *periosteal spavin*, seton will often be found a very useful and effective counter-irritant. It must be remembered that spavin, whether it appear in one form or the other, is a disease that rarely manifests much acuteness, or indeed occasions much pain, unless in the latter and aggravated stages of the disease; and on this account, seton from its action, though tardy, being unre-

mitting, is calculated, give it time enough, to work a great amount of good. A blister, prompt and for a time severe in its operation, will probably effect some immediate relief, but that relief is not found to be of the enduring or withstanding character of that which is so much more slowly brought about by the seton. So far there certainly is a sort of appositeness, as a remedy, of seton to spavin; but that, beyond this, to imagine it possesses any *specific* power, is, I repeat, absurd.

Ordinarily, but one seton, that being a broad one, is passed for spavin; the course given to it being from above, directly across the tumour, to below it. Another seton may be advantageously passed, taking a similar course, on the outer side of the hock; and this constitutes my ordinary practice. For the first three or four days after it is passed, the seton should not be moved—not drawn up and down, indeed, until such time as sufficient inflammation is aroused in the parts contiguous to it, the object being to promote all the counter-irritation and counter-issue possible. And until the desired inflammation and swelling be manifested—the better still if it pervade the limb—the patient should be kept standing up in his stall; afterwards, a loose box is the preferable situation for him. When we find we have succeeded in eliciting a sufficient issue of laudable pus, we must take care that the seton be moved sufficiently often to prevent the lodgment of the matter, and the consequent formation of small abscesses or pouches underneath the skin; since the effect of such detention will be, ulceration of some part of the canal of the seton, and consequent premature casting off or liberation of the tape. In fact, this is one of Nature's methods of getting rid of the offensive and irritating tape or thread, or whatever else the seton may consist of; the other being, ulceration gradually going on in either aperture of the seton, and especially in the upper one, at the part over which the knotted end of the tape usually depends: it being curious enough to observe how ulceration progresses at the place from the pressure of the tape, while granulation keeps repairing the aperture above the tape; until at length the seton, growing gradually shorter and shorter in its canal, is completely cast off by unassisted natural procedure.

I have limited my recommendation of seton to the case of external or periosteal spavin. There is one stage, however, of articular spavin in which the seton not infrequently proves of service, and of service even after firing appears to have failed. The patient, we will say, has been properly fired, has had the requisite period of repose or turning out, his fired parts have healed and cicatrized, and yet he proves, shortly after return to work, if not before, "as lame as ever." Firing the bald blemished parts again is out of the question. What then is to be done? I say, under

such circumstances, I have known the introduction of a seton followed, after some three or four weeks of issue—for time must be allowed—by considerable benefit, if not by soundness; and, what is more, this secondary or deferred soundness is likely to turn out of permanent character. My interpretation of such cases as these is—not that setoning has surpassed firing as a remedy, but—that the actual cautery has left incompleted the process of cure, for lack of time probably having been given to bring it about, and that the seton, and the additional repose, have at last effected the object. I believe that the firing has failed—if “failure” such can be called—either from its not having been practised with sufficient severity, or from insufficient time being given before the animal’s work was resumed.

In the year 1827 I had an opportunity afforded me of testing—as far as the cases experimented on would test them—the comparative efficacy of the seton and the actual cautery. It was the year I entered the First Life Guards, and it became requisite for me, on joining, to make a general inspection of the horses of the regiment. In the course of my inspection I found nine horses lame from demonstrable spavins; some three or four of which I was of opinion offered prospects of amendment by treatment, and accordingly these were taken into the infirmary. This occurring during the time that setons had acquired a sort of specific fame from their alleged all-but universally successful employment in spavin by Professor—then Assistant Professor—Sewell, at the Royal Veterinary College, it was thought these cases might be made to cast some light upon the much disputed question. With this in view, two were selected, both chronic, both exhibiting stiff and hobbling lameness on emerging in the morning from their stables, both aged horses, both in fact as nearly similar as two cases of spavin could be expected to be*; and, at the period of my taking them under my care for treatment, both horses, lame as they were, actually at work in the ranks. After some requisite preparation the spavined hocks of both these horses were blistered; but no relief was afforded. A month afterwards, one of them (No. 6 of A troop) had his spavined hock fired, but not deeply; and across the spavin place of the hock of the other horse (No. 26 of F troop) a seton was introduced, the broadest tape that could be procured being used for the purpose. The inflammation in the fired hock was augmented, and for a time maintained beyond the ordinary degree, by dressings to the scores of blister ointment; while the seton in the other horse was kept discharging as much as possible by digestive dressings. The seton was kept in five weeks. At the

* Unfortunately, I could learn nothing satisfactory concerning their history or period of lameness.

expiration of two months from the commencement of their treatment, the setoned subject was cast and sold on account of "incurable lameness," he having experienced but little relief; whereas the fired horse returned to his stable "sound," to resume his duty. I am quite aware that an experiment of this description is open to objection, first, from the difficulty, next to impossibility, of procuring two exactly similar cases of disease*; and, secondly, from their being insulated cases; though this latter objection falls to the ground when it comes to be supported by that observation and experiment on an extended scale which decides the question of efficacy in chronic or confirmed cases of spavin by a great majority in favour of the firing-iron.

I shall now relate a case which would seem to prove the superiority of the seton over the cautery; though, for my own part, I would not assert that the failure of the latter was not ascribable to lack of time of repose, or of absence from work, being afforded.

No. 21 horse, belonging to H troop, was admitted into the infirmary June 1835, on account of relapsed lameness from palpable spavin. Inungation of the tumour with ung. ant. potassio-tart. having been employed without benefit, the month following the hock was fired *deeply*. The operation was performed on the 23d of July, from which period until the 26th of September the patient was kept in a box. Still he went lame; and, lame as he was, was sent to his own stable to take walking exercise in hand, it being thought that, after so much rest, motion might benefit him. On the 12th of November, he having done nothing in the interval but take, daily, his prescribed walking exercise, he returned into the infirmary for treatment lamer even than he had been before. A blister was applied upon his hock, on the outer side of it; but that did no good. December the 10th two setons were passed, one along the inner side immediately upon the spavin enlargement; the other along the outer side of the hock, the length of each being four inches. The setons continued discharging for three weeks, and then, on account of efflorescences of granulations sprouting up around their apertures, were taken out. It might, also, be as well to state, that during the first fortnight they were in they excited and kept up a more than ordinary irritation and inflammation; producing, indeed, so much general tumefaction of limb, that it was deemed advisable, in order to restrain it, to give cathartic medicine, foment, &c. The week after the final extraction of the setons I had my patient trotted out, and could not, to my agreeable surprise, perceive any lameness.

Seemingly contradictory as these cases are, according to my man-

* It might be urged that it was impossible to say with precision what was the state of the hock *joints*.

ner of reasoning on them, they all three but tend to the elucidation of the same pathology; which, though it has been given before, it may be useful to repeat here;—and that is, that what we call the “cure” of spavin consists in the complete ossification of the diseased joints, and consequent perfect *anchylosis* or functional annihilation of them; and that the remedy which brings about this final conversion of the morbid parts the soonest is the best, and that the cure cannot be manifested until such is accomplished; the horse then, but not until then, going free from pain: the use of the main joint of the hock being left him entire wherewith to perform flexion and extension with sufficient freedom to constitute what in these “cured” cases is regarded as working soundness. Should therefore firing, either from not being “deep enough,” or from insufficient laying-by of the patient, fail to restore soundness, or, what amounts to the same thing, to bring about this desired or indispensable transformation of parts, a seton, by exciting inflammatory action afresh, may complete the process: on the other hand, whatever seton, or blister, or other remedies, may fail from want of stimulant power to effect, is likely to be accomplished by the potent and paramount efficacy of the firing-iron.

BLISTER.

There appears to me more reason for making a comparison between a seton and a blister, as remedies for spavin, than between a seton and the actual cautery; and of the two former, for my own part, I give the preference to the seton. It is not at all times safe or politic to *theorize* on the action or effects of different remedies, since on occasions those prove of most avail which afford, in our preconceived opinion, the smallest promise; though, most assuredly, were I permitted to do so on the present occasion, I should say that a seton, from the enduring character of its operation, as well as from the amount of counter-inflammation it is frequently productive of—to say nothing of the unremitting issue arising from it—is a remedy better fitted for the relief of a chronic deep-seated disease, such as spavin, than a blister is; seeing that a blister, though sharp enough and prompt enough in its operation at first, quickly degenerates into comparative inaction. It seems not so much to be the activity or severity of the counter-irritant as its enduring unremitting operation that proves so desirable; though, undoubtedly, the combination of both virtues in the same remedy will give it a high rank, a principle on which I would account for the superiority of firing for spavin.

It is clearly of little or no use to apply a blister for a spavin unless that blister is a *severe* one; and, therefore, I recommend that strong blistering ointment should be used for the purpose.

Such ointment as the farriers of olden days were in the habit of using, such as contains bi-chloride of mercury and Venice turpentine; ingredients which, while they add causticity and stimulancy to vesication, tend materially to protract the operation of the blister. And as soon as one blister has worked off, if time can be spared for it, I would recommend a second to be applied, this being the only plan of insuring any thing like success from vesicatories.

It was a common practice at one time, and continues to be with some even at the present day, to apply a blister after firing for spavin. For this, however, providing the firing has been performed with the requisite severity, there cannot be the smallest necessity.

OINTMENTS OF ANTIMONY, MERCURY, AND IODINE.

These are hardly to be named as remedies for spavin. I have, it is true, now and then employed antimony ointment—composed of the potassio-tartrate of antimony and lard—with some slight advantage; but this has rarely proved lasting. As for mercurial ointment, of itself it may be set down as all but inert and quite useless, though, in combination with iodine, of late a good deal has been said in its favour. My own experience is yet too limited to enable me to say any thing decisive about the efficacy of such a combination in spavin; though, from all that I pretend to know and have heard, I should say that absorption or removal of the exostosis was the utmost we ought to expect from it, and that therefore its employment promised no benefit save in periosteal spavin attended with enlargement.

PROFESSOR SEWELL'S INTRODUCTORY LECTURE.

*Commencing the Session at the Royal Veterinary College
for 1846-7.*

[From the "Veterinary Record."]

THE Professor having expressed gratification at seeing so many friends around him, proceeded to remark on the alteration made in the period for commencing the lectures, which, he believed, would prove beneficial by allowing a longer time to students for dissection, and also enabling them during the summer months to be practically engaged in the acquirement of professional knowledge with their preceptors. It was a source of satisfaction to him to know that within the walls of the College were now taught all the divisions of study necessary to the perfecting of the education of

the veterinary surgeon; and, the curriculum being thus far complete, he felt assured that but one desire would actuate both the teacher and the taught,—namely, that of advancing the veterinary profession by the establishing of sound principles, and the inculcation of a spirit of oneness and of amity.

In the earlier ages the practice of medicine was necessarily rude and empirical; and traditions were handed down from one practitioner to another, these having no foundation beyond that of benefit having once resulted from the adoption of a particular course, or the employment of a certain agent. And probably, before the flood, diseases were not so general as afterwards; the altered condition of the earth favouring their development.

The practice of veterinary medicine was, doubtlessly, coeval with that of the human, both having their origin in similar causes. Moreover, “flocks and herds,” we are told, constituted the riches of the inhabitants of the East during many generations, the horse being used only for parade or pleasure, and in war; yet, when he became more domesticated, and his enduring powers were better appreciated, many diseases shewed themselves in him from which previously he had been altogether exempt.

The history of China, it has been before stated by me, has records of the employment of chemical compounds from a very early period. But although these are at the present day viewed as chemicals, they were doubtlessly not formed by processes of art, but were natural productions; such are Glauber's salts, natron, and saltpetre. The remains of ancient monuments, too, would lead us to conclude that excellent mechanics and artisans then existed; and it is but fair to infer that they formed instruments to be employed in surgical operations, by which they rivalled the untutored Esquimaux, who, after having divided with a fish-bone the skin and muscles of an arm or leg, places the limb in a crevice on the ice, and snaps the bone in two, staunching the blood with burning moss in lieu of moxa.

The wealth of a nation conduces to the prevalence of quackery, and it is now as rife as ever. During his time he had witnessed the employment of “earth balls,” “metallic tractors,” and “medicated vapours.” And we have now Hydropathy, Homœopathy, and Mesmerism: these, too, will by-and-by cease to be fashionable, and pass away, giving place to other modes of cure, fancied or real.

The earliest practitioner of human medicine of whom we have any authentic account was Hippocrates. He practised in Greece, and dissected apes and quadrupeds; shewing how thus early anatomy was considered as the basis of medical science.

Then arose two schools, the one opposed to the other as to the remedies to be employed in the cure of diseases. Galen and his

disciples advocated the use of vegetable substances, which are certainly not always to be relied on, since their properties will vary with climate, season, and mode of culture. In chemical compounds unquestionably we have far more energetic agents, yet the influence of many of these on the tissues, we are, even at the present day, not fully acquainted with; and therefore great caution is requisite in their administration, and an intimate knowledge of the governing laws of chemistry called for.

Virgil, the celebrated poet, may be said to have first practised the veterinary art, and this he did in the stables of Cæsar Augustus; he was also an excellent meteorologist, and carefully noticed the barometric and thermometric changes that took place in the atmosphere. And this should be done now; since the advantage resulting from an application of scientific principles may be seen in the erection of stables, and their proper ventilation; for before this was properly understood, the numbers of animals that were destroyed or died from diseases engendered by foul air in stables almost staggers our belief at the present day. This is one benefit that has followed from the establishing of veterinary schools for the instruction of educated young men, both in this country and the continent, although it is true that we are indebted to France for having set the example.

A succinct history of veterinary schools was then given by the Professor, embracing the origin of the Royal Veterinary College; and he proceeded to remark on the necessity of, and advantages derivable from, a division of study, and the student giving to each his particular attention. A general outline of anatomy would be given by the appointed teacher within the walls of the theatre; but the dissecting-room must not be neglected, since there the pupil would be rendered even more familiar with the structure of the frame, by handling it himself, and instituting the necessary investigations. Physiology, or the function of parts, would next occupy his attention. The eye, the ear, the lungs, and other organs, would be passed in review; and the uses of bones, ligaments, muscles, and nerves, pointed out, as well as the changes that take place in them by disease, constituting pathology.

In the performance of many operations the first named divisions are imperatively demanded. Thus, in cases of chronic lameness, when neurotomy is had recourse to, were the nerve simply divided, it would re-unite in about two months, and the lameness, in all probability, return; but by excising a portion of the nerve, the horse is rendered fit for work for many years after.

We think that some progress, and some improvement too, have been made in veterinary science since the Veterinary College was established in England. This mode of performing the operation

of neurotomy we might, perhaps, be permitted to refer to as a proof; and there are many other lamenesses than that arising from what is called the "navicular disease," for which it has been advantageously had recourse to. Glanders, a disease at one time so prevalent and so fatal, is now far less frequently met with, and, certainly, is not incurable in its earlier stages, especially that form designated chronic glanders. The plan successfully adopted here, of late, has been to trephine the frontal and maxillary sinuses, and to pass a seton through from one to the other, so as to evacuate the cavities; conjoining the use of stimulating injections with the internal administration of the sulphate of copper, which acts as an astringent tonic. And even in the acute form, when ulceration of the septum nasi has taken place, this agent, when given in large and repeated doses, has occasionally proved the means of bringing about a cure; but, when the turbinated bones become involved, and the lungs are extensively diseased, this result is always doubtful.

Of many maladies, different, and we hope more correct, views of their nature are now taken. Thus, at one time, "roaring" was made to depend alone upon a band of effused lymph which stretched across the trachea. But this, certainly, is not the only cause. A distorted state of the rings of the trachea frequently gives rise to it; this being induced by horses being tightly reined in. Or tumours pressing on this tube may cause it; and also a paralyzed state of the laryngeal muscles.

"Stringhalt" has been found to be the result of a diseased state of the muscles of the thigh and the nerves thereof;—"shivering," an affection of the stifle-joint, associated with a luxation of the patella;—"kumree," a peculiar disease of the loins, attacking horses in India, is now known to be paralysis, arising from an effusion of blood on the spinal cord; illustrative of which are those beautiful drawings by Mr. Ashton, V.S. of the Hon. East India Company's service;—"rabies," a fatal disease in all animals, is essentially an affection of the meninges of the brain and its continuation, the spinal marrow, arising from the blood being empoisoned, and by the withdrawal or entire alteration of this fluid is the only hope we have of effecting a cure.

With respect to operations, these are now performed in accordance with true principles of surgery; and sometimes we have recourse to such as the practitioner of human medicine hesitates to perform, being fearful of the consequences; for instance, œsophagotomy and tracheotomy. The extraction of calculous concretions from the bladder has become a common operation, and subcutaneous periosteotomy is constantly performed to relieve the lameness attendant on splents and spavins; care being taken, in the last-named affection, that the capsule of the joint be not wounded, while

the subsequent and long-continued use of a seton will be required to perfect the cure.

If we turn from the horse to our other domesticated animals, here, too, it will be seen that some improvements—the result of the onward march—have been effected. The pustular disease, still occasionally seen, but once so prevalent among ruminants, readily yielded to the remedies employed; but in pleuro-pneumonia, which is now so general in the same class of animals, we have been less successful in our treatment; this, in great part, arises from the cases not being placed under the care of the veterinary surgeon sufficiently early. The cause of these epizootics appears to be occult and altogether inexplicable; but he would suggest that they had their origin in the changes that are at the present time going on within the bowels of the earth, whence a constant disengagement of gaseous matters takes place from the earth's surface in the form of mephitic exhalations; and this may be said to be now existent all over the world. Cattle in South America, for years past, have been diseased as they now are in Europe; and in the West Indies a similar affection has shewn itself.

Nor has the vegetable kingdom escaped. The reason why the herbivora should be first attacked may be assigned to the miasm being more energetic near the ground, to which their nostrils are continually brought while collecting of food, so that they are compelled to inhale it. But the same law we find to obtain with the human subject. Thus, during the prevalence of a fever, not long since, in Glasgow, those inhabiting the basement stories were first and most severely affected, while those who lived on the higher floors experienced, comparatively, slight attacks.

In certain localities, however, this exudation from the surface of the earth does not take place, but, instead thereof, volcanoes burst forth, by which the like poisonous gases become diffused in the atmosphere. It is thus that Nature is relieved; and unless this be afforded by some such means, chaotic confusion would again take place, from a disruption or a breaking up of the crust of the earth. These effects may appear to us to be "partial evils;" but they, nevertheless, are productive of "universal good."

The lecturer closed by adverting to the several veterinary authors, and offering some general advice to the students as to their plan of study, associations, &c.; feeling convinced that their future conduct would be much influenced by the bend or inclination given to the mind while at the College; and that, although youth might be at times too sanguine, still by circumspection of conduct, with probity and industry, a reward would assuredly be reaped.

Especially would he advise them to pay much attention to the practice of the Infirmary, by which an inculcation of those prin-

ciples is effected that, in after-life, prove of paramount worth. To morbid anatomy some portion of time should also be devoted; and the knackers' yards would often impart an instructive lesson, and, at the same time, enable them to learn to perform many operations, and become expert in the use of the surgeon's knife. But he could not too strongly deprecate operations performed on living animals. No good resulted from the act, and the public feeling was wisely against it. Torturing experiments on animals did but debase the man that resorted to them.

Nor must the principles of the science of chemistry be neglected by them, as their application would prevent the practitioner committing many errors in the combination of the curative or therapeutic agents he may employ; and also enable him to counteract the effects of poisons, and to demonstrate their existence after death.

Nor did he apprehend any thing but good to follow from that which seemed to alarm some members of the veterinary profession, namely, the dissemination of knowledge by means of agricultural schools and colleges. They had his hearty support, since he was convinced the principles there taught would cause the veterinary surgeon, who was thoroughly acquainted with his profession to be more sought after and consulted during the existence of epizootic and other diseases, both among horses and cattle, the agriculturist finding that he alone is capable of successfully combatting with disease who has received an education based on science; and thus the farrier and the cowleech would be effectually driven from the station which they have so long usurped. Indeed, it would not surprise him if each county, in the course of a short time, possessed its separate and independent school for the instruction of students in agriculture, a division of science that has been too long neglected in this country.

INTERESTING CASE OF LAMENESS FROM DISEASE OF THE LIVER.

By WILLIAM SMITH, M.R.C.V.S., Epsom.

IN that part of Dr. Brauell's Essay on Podotrocholitis which appeared in your last number, he asks, "does not chronic podotrocholitis occasionally arise from internal causes?" and, reasoning analogically, is inclined to answer in the affirmative. To corroborate his opinion, he cites several cases of lameness alternating with, or produced by, internal disease. He omits, however, to mention disease of the liver as a cause of lameness, though I believe the French as well as English veterinarians have long been in the

habit of considering it a cause of lameness, however obscure, in the off fore-leg. In all probability I should not have noticed Dr. B.'s opinion, had I not had a case last year that caused me too much trouble to fail to impress it strongly on my memory.

I was sent for in August to see a fine black cart colt which was labouring under a slight attack of fever, with a little soreness in his sides: he was treated in the ordinary way, and soon recovered. He was now found to be lame in the near fore extremity: the shoe was removed, but nothing was found in his foot or any part of the leg to account for it. He was ordered rest for a week, and at the end of that time was no better. The peculiarity of his gait now evidently pointed out the shoulder as the seat of lameness. On being taken to the pond, although he stood in the water up to his knees, he had great difficulty in getting his head low enough to drink, the act of bending his neck evidently giving him great pain. His shoulder was blistered, setoned, &c. with no effect: the muscles wasted, the lameness increased, and he was destroyed after four months' treatment, under the impression that the injury to the shoulder, whatever it might be, was incurable. On examining the leg after death, every articulation was found perfect; no traces of inflammation, no symptoms of the muscles having been lacerated or in any way injured; in fact, every thing perfectly healthy, except that the muscles of the shoulder were paler and less in volume, owing to their want of use. Now, for the first time, the idea struck me this might be a case of lameness arising from some disease of the liver, and, on proceeding to examine that viscus, its appearance, I think, justifies me in pronouncing it to be one of those exceedingly rare and interesting cases. The contents of the chest and abdomen were, as might have been expected in a young horse, perfectly healthy, with the exception of the liver, which was diminished in bulk nearly one-half, but much increased in density, and studded throughout with small cartilaginous bodies, which, I think, from their shape, might be called asteroids, being full of points very much resembling a star. These were so hard, that I at first thought they were osseous, but I succeeded after some difficulty in deciding their cartilaginous nature. Such is a brief sketch of this, to me, extraordinary case, the absence of any cause for lameness rendering it so. Although I might be wrong in attributing the lameness to disease of the liver, if I am right in referring to an internal cause of lameness, the case is unique, as in all other cases referred to the lameness has been in the off or right leg.

Should you consider the above worthy a page in your valuable Journal, you will oblige me by inserting it.

January 11th, 1847.

OBSERVATIONS ON THE HORSES OF CANADA.

[Contained in a Letter from Mr. CHAS. PERCIVALL, Veterinary Surgeon to our Royal Artillery quartered in that country, to Mr. WILLIAM PERCIVALL.]

Montreal, Lower Canada, Nov. 25th, 1846.

My dear William,—I MAKE no doubt but that you have often, ay, very often (now, don't deny it), called me a precious lazy fellow, for not contributing to the pages of THE VETERINARIAN: the truth is, until now I have not had any thing worth communicating. You have expressed a wish for something relative to the horses of Canada, and now you shall have it.

In speaking of the horses of Canada, I will, in the first place, give you a description of the Canadian or French horse, which was originally brought from Normandy; we, likewise, have imported horses from the United States and England, all of which have been from time to time crossed with each other. The Canadian horse has very much degenerated of late years, from want of attention; indeed, any thing in the shape of a superior *true* Canadian is very difficult to find. They are principally to be met with in Lower Canada, and the best description are in the neighbourhood of Kumsask, and the Island of Orleans, below Quebec: they are likewise to be found in the vicinity of Lake St. Peter and Three Rivers. In Upper Canada they are rarely seen, excepting about Amherstburgh, an old French settlement. The true Canadian is a short-legged, sturdy, compact, useful, hardy little animal, possessing great strength and powers of endurance: they have good heads, with a good back and loin, but coarse and heavy about the neck and shoulders, it not being customary to *alter** them. They rarely exceed fifteen hands, more frequently are much below it, with tolerable action, but all *dishing* more or less, and not unfrequently have a peculiar way of going termed *racking*; the fore and hind legs on either side being advanced simultaneously, and the action of the shoulders appearing to be confined. These are commonly called *pacers*, or *rackers*, and it is supposed by some to proceed from the fore and hind legs being tethered together, to prevent their straying from the pasture. But I cannot agree with this opinion; for, in the first place, it is not customary to have recourse to this method of keeping a *breachy*† horse from going astray; and, in the next place, you do not meet with *pacers* in Ireland, where this tethering system is very common. Now, in reference to *pacers*, you

* *Alter* is a term made use of instead of *castrate*.

† A *breachy* horse, or *breacher*, is one that is constantly knocking down the fences if he cannot leap over them when turned out: they are frequently very troublesome, and sold in consequence.

will find in the Library of Useful Knowledge, article " Draught," page 411-12, that horses trotting with both legs on the same side raised at once are made mention of; and you will observe it is stated that " this is never seen to occur in a state of nature at the present day ;" that it is inconsistent with the balancing of the body; and was, therefore, more probably, an error of the artists. Now, although it is not to be seen in England, I beg to observe, in support of the ancient sculptors, that it is very commonly seen in this country, and is, I am of opinion, natural to a great many horses; and that they are encouraged in it, is beyond a doubt, from the circumstance of its being much easier than the high trotting action; and they are, many of them, quite as fleet as the regular trotters. The action of the pacer has a strange unsightly appearance, and would almost induce one to believe he was unsound or crippled in his action. In Upper Canada it is customary to emasculate the horses, but in some parts of the country they follow the old practice of squeezing the testes, and horses are common to be met with having diminished testes, scarcely perceptible. I know an instance of an individual, who, shortly after his arrival in this country, purchased a Canadian horse, to carry a lady. Upon being asked if he did not intend to *alter* him, he was surprised at the question (not knowing the meaning of the term), but much more so, as you may suppose, on finding he had purchased a stallion without knowing it. The horses are good-tempered willing slaves, seldom *balkey**, and for powers of endurance not to be surpassed, but more adapted for harness than the saddle. In the eastern townships they have a breed they call *Morgan horses*, a cross between the Norman or French horse and the Armenian mare; they are of a superior description, and highly prized in that part of the country, being very compact, and well adapted for general purposes.

On this island (Montreal) the horses are a miserable set of garrons, generally speaking; nevertheless they are wonderful little animals to work, and are made to exert themselves far beyond their powers. Fortunately for the owners and drivers, but unfortunately for the willing little slaves, *Martin's Act* is not in force here; and more's the pity, for I have witnessed, and will venture to say that there is, more cruelty practised towards them in this city than in any quarter of the globe.

I told you upon a former occasion† that the majority of the horses in this place are unsound, and that all the lame horses are said to go sound in the winter—which, certainly, many of them do; and this you will easily understand when I tell you we have between three

* A *balkey horse* is one which refuses to draw.

† In vol. xviii of THE VETERINARIAN, p. 43.

and four feet of snow on the ground, and that it is like going on so much sand; in addition to which they are shod differently, being turned up at the heels to prevent slipping; consequently there is less jar and concussion than on the plank or Macadamized road.

The plank road is usually made over swampy ground, and where there is a difficulty in procuring material for the Macadam. The planks are ten or twelve feet long, twelve or fourteen inches broad, and three or four inches thick, laid upon sleepers, and fastened down with spikes or wooden pegs; and, from the circumstance of not resting on the ground, there is a degree of yielding motion which proves injurious to horses which travel much upon them; viz. that they get "shook in their shoulders."

In travelling over the plank road between Hamilton and Port Dover, the summer before last, the wheels of the stage fired several times, and it was said to be caused by the plank,—“that it always did make the wheels fire;” and no argument would convince the driver but that it was solely attributable to the wooden road. Now, as regards its being injurious to horses, I am of opinion it is on the same principle as the wheels fire (the pace); but the re-action of the boards, after yielding to the combined force and weight of the animal, may, and I am of opinion does, produce lameness in the feet; and that, after a time, the muscles of the shoulder diminish in size from want of action, which causes those unacquainted with the subject to believe the horse is “shook in his shoulders.”

In Upper Canada—a country in every respect more like the old country, the horses, cattle, sheep, &c., in fact every thing, being inferior to what you meet with in the lower province—the horses are much larger, more powerful, and well adapted for draught; but any thing like a sound, good, saddle horse—like angels' visits—are few and far between: with a candle and lantern you would scarcely find a dozen throughout the province. The best horses in the upper country are to be met with in the Dutch and Quaker settlements, about Waterloo, Wilmot, and in the Jersey settlements, Newmarket and Blackburn. To the Pennsylvanian Dutch, who were some of the earlier settlers, Upper Canada is much indebted for the superiority of her horses, having brought with them some capital brood mares; and they have, at the present time, some of the best description in the country, and take great care of them, generally speaking: as also do the Quakers, who contribute much towards the few sound horses to be met with, by not allowing them to be worked at too early an age; whereas, with the generality of farmers, they are worked at two and three years old, and not unfrequently at a much earlier period, which is the cause of there being so many unsound horses throughout the country. You will have a pretty good idea of the difficulty there is in meet-

ing with sound good horses, when I tell you that it took three months this summer, travelling about the country, to pick up twenty-five horses for the artillery service.

There is no scarcity of stallions in the country, far too many for improving the breed. Every fellow who possesses a large-bodied staring colt is sure to keep him for a *stud* or *seed-horse*, as they are sometimes termed, without any reference to his points; and the country is overrun with brutes of an inferior description, many of them covering at a dollar and two dollars; and if the owner of the mare cannot pay in cash, they *trade* a little, that is, he receives a certain quantity of wheat; and it is this low price which induces very many farmers to send their mares to them, in preference to imported English and American horses, of which there is no lack. Of the former, there is Blacklock, Manx, Panmure, and Messenger; and of the latter, Truxton, Prince Albert, Tom Kimble, Monolipan, Dan O'Connell, Catskill Duroc, Orphan Boy, and Hambletonian. There was also a horse called Wild Deer, bred in Canada. I saw several of his stock at Picton, Prince Edwards' District, of a superior description; and from the circumstance of his having recently been purchased by an American, and taken off to the States at thirteen years of age, I have no doubt he was one of the right sort. There is likewise a horse called Sir Walter in that part of the country (Canada bred), well calculated to improve the breed in that neighbourhood. Blacklock and Messenger's stock are of the very best description, as is also Prince Albert's and Hambletonian's. Catskill Duroc is highly spoken of, and carried off the premium of £50 at a recent agricultural show at Woodstock. There is also a horse called Darlington, and another called Tippo.

When purchasing horses in Upper Canada the summer before last, I saw a two-year old Blacklock colt, which, from the circumstance of his having been put to work at fifteen months' old, had scarcely a leg to go upon: there was every thing about him calculated to make a good nag, providing care had been taken of him. I likewise saw another very promising two-year-old, by the same sire, in the neighbourhood of Newmarket (from the owner of which we purchased a three-year-old), and I endeavoured to impress upon him the necessity of taking care of him, but all to no purpose; for, upon calling on him this summer, I found he had been ploughing and drawing stumps out of the bush with him, and that he had thrown out spavins and curbs, and was completely ruined.

So long as this system is kept up, which I have explained to several influential members of the Agricultural Society, it matters very little what sort of stock they breed from. Many of the Canadians are half Yankees, and have some extraordinary expres-

sions in speaking of their horses. One fellow said his horse was "dreadful good-tempered;" another, in describing a span of horses (pair), that they were a "terrible good match;" and an American gent. at Cobourg, on my admiring a span of horses which I sat behind in his carriage, said he had won as much money with one of them (a superb trotter) as I could "shake a stick at." A fourth, by way of expressing his approbation of a horse I was looking at, said, "that horse just fills my eye." A good legged horse, one having the sinews large and well developed, they call a "strong corded" horse, and, if he happened to have bred him, he will tell you he "raised" him. If one or more white legs, he will say he is "split" in the legs. When shewing you a horse which is not in saleable condition, he will remind you that he is not "fitted up." In the United States they have long been celebrated for their famous trotters. Lady Suffolk trotted a mile in 2 m. 28 s.; Dutchman, in 2 m. 29 s. An American, in describing his horse, will tell you he is a 2 m. 28 s.; 2 m. 30 s.; or 2 m. 35 s. horse. If he does not happen to be of trotting celebrity, he will describe him by his (heft) weight, calling him a 9, 10, or 11 hundred horse. Shortly after my arrival in this country, finding the great difficulty there was in meeting with horses, I went to Burlington, in the United States, in search of a pair. Whilst there, I took a fancy to a clever trotter, which I should have purchased, but was apprehensive I should not be able to match him in Canada. The owner, a Yankee, *and of course a smart chap*, in recommending him "guessed" he was sound, and that he had not been "pricked."

Note.—*Pricked* is a term made use of in place of nicked. The operation is commonly performed with a penknife, introduced so as to divide the muscle on either side of the tail, leaving the skin entire.

P.S.—I have not much to communicate as regards the diseases in this country; but I shall give you an account of a horse which had either a dislocated or broken neck; another which recovered from a broken leg; a case of fracture of the spinous processes of the dorsal vertebra; and a description of three hermaphrodite horses.

Adieu.—God bless you all!

THE INTRODUCTION OF THE CROTCHET INTO CANINE OBSTETRICY; AND ITS SUCCESSFUL USE IN SEVERAL CASES OF PARTURITION.

By EDWARD MAYHEW, *M.R.C.V.S., London.*

VETERINARY science has done much towards ameliorating the condition of the horse, which appears to be the principal study of its members. For the dog, the many have accomplished little, so little, that the merit of improving the treatment of that animal when suffering under disease, fairly belongs to two individuals—to him who singly founded a new branch of science, and to him who by his humanity and genius softened and enlarged the views of his master. Canine pathology is, unfortunately, not generally understood by practitioners, who, unprepared for its intricacies, usually decline to cope with them. Certainly, the knowledge of the horse does not fit the mind for the contemplation of the dog. The animals present external differences sufficiently marked; but in their diseases they are even more dissimilar.

It has fallen to my lot to be much employed in that department which not a few refuse to engage in; and in the hope of communicating something towards a neglected branch of knowledge, I am induced to intrude upon the notice of your readers.

Cases of parturition in the bitch are those which present the greatest difficulties; nor are these lessened by the eager expectations of those who seek our aid in behalf of the animal. The feelings are appealed to while the mind is perplexed, and the situation of the practitioner is rendered doubly distressing by a conviction of the inadequacy of the means at his command. The instruments in general use are more likely to injure than to benefit, and have, therefore, by me, save on particular occasions, been discarded. Medicines in such cases do little good; the after-consequences being always to be dreaded, even if the immediate action does not disappoint. Manual assistance can seldom be of service, the smallness of the parts allowing no more than an exploration which painfully informs us of the difficulties we have no power to overcome. Last, not least, hope in the power of Nature here deserts us: the peril on every side is imminent, as the ability to cope with it is small. Under such circumstances, perhaps, it is no wonder if the majority of our profession refuse to attend such cases, not without reason looking upon them as "desperate."

My success has not been great, though it in many instances surpassed my expectation. I have been often pleased, but more

often vexed with the result; and it has been only lately that I have acquired any mastery in the treatment. The teaching which a man receives from repeated disappointment has at length suggested an instrument which appears to be equal to its object. It has so many recommendations that I am induced, without further delay, to submit it to the consideration of the profession, who will find it to be cheap as regards price, simple in construction, easy of application, and, above all, safe in its employment. The power which it will give the operator seems to be all but unlimited, and with it cases that heretofore were beyond the reach of skill become reduced to our controul.

Let me now briefly narrate the circumstances out of which the adoption of this instrument arose. An Italian greyhound bitch, of very high breed, narrow make, and diminutive size, being loose and at heat, had received the attentions of a large Russian poodle dog. The animals in every point presented as great a contrast as any two creatures of the same specie could exhibit. The unfortunate circumstance had been discovered by the owner, who, vexed and alarmed, sought my opinion as to the probable consequence. There was but one opinion to be given. I proposed to produce abortion, or, at all events, premature labour: at the same time stating that the delicate nature of the bitch rendered either resort somewhat dangerous, but not so much so as to be put in the balance against the certain peril of allowing her to gestate for the full period. My advice was declined. The owner clung to the hope that the interruption of the intercourse, and the disparity between the two animals, would prevent impregnation, and resolved to put his bitch immediately to a greyhound dog of her own kind. I expostulated, and endeavoured to render him alive to the hazard which he was thereby incurring. He left me, and I heard no more from the gentleman for ten weeks, at the expiration of which his servant came to me in haste, saying the bitch was in great agony, and I was to attend without delay.

As I entered the house the cry of the animal saluted my ears: I was prepared by it for much that I found. The bitch was running about, now stopping to howl, then turning herself round to lick the seat of agony. The throes were strong and quick—the pulse not much excited—and the bitch seemed to be still vigorous; but she was very thin, and the abdomen disproportionately extended. On examining her, the parts looked at first only greatly swollen, but on the labia being separated a black body was discovered, which proved to be the muzzle of a dead pup, that had none of the greyhound in its features. The head, nearly born, was firmly impacted: how long it had been so could not be ascertained; but the vulva was quite cold, the passage dry, and the poor beast

had been crying for the last thirty-six hours, without the cause of her agony being understood.

The previous history, confirmed by the present appearances, told me there was no hope; but at the request of the owner I determined to do all that was in my power. I was enabled to bring the head a little lower, and, the labia being held asunder, I removed all of it but the skin, to which a piece of cord was fastened. I then tried to put the pup back, in order to bring forward the legs; but so firm was the impactment that no motion could be induced by the utmost degree of force I dared apply. Many pups are, however, delivered with the forelegs inclined backward, and the position of the limbs is not with these of the same importance as with animals which, at the time of birth, have the osseous structures more consolidated. I thereby resolved to make traction, and did so; but the parts gave way, the cervical vertebræ and a large portion of the skin separating from the trunk. This enabled me to put back with ease the remaining portion of the fœtus, and some rest was given to the bitch. The parts were fomented, and beef-tea administered.

The animal was now brought to my infirmary, and I made a second attempt to bring forth the mutilated pup. The bladder and rectum were evacuated, and a laxative administered. All the various forceps were used one after the other, but invariably without success. They tore away portions, but seemed only slightly to move the body; and, after half an hour had been fruitlessly consumed, the condition of the patient obliged me to desist.

In the course of the day a third effort on my part, in which my patience and ingenuity seemed to be exhausted, was attended with no better result. I gave orders to support the animal with strong beef-tea; and in the evening, when the medicine acted, the throes returned, but the position of the fœtus continued the same—sufficiently forward to be felt with the finger, but refusing to move under any force which I had the power of exerting.

I was obliged to meet my pupils in the evening, and was not sorry to leave a case which had now, in my mind, become hopeless; but as I walked I could not forbear thinking of that which had occupied most of my attention during the day. The different instruments employed to facilitate the labours of different animals passed in review before me; but some were not applicable to the dog, and others could not be manufactured with sufficient speed to benefit my present patient. The crotchet, used with such power by the human practitioner, seemed the one most likely to avail; indeed, it had often before occurred to me, that an adaptation of this instrument would, in our hands, be of infinite service: and, after I had dismissed my class, I hurried to procure what I had

conceived would be useful. Mr. Perry, to whom I applied, had a human crotchet in his shop, and this he consented to alter according to my directions. I stayed till the alterations were completed, and by eleven at night reached home, to put the adaptation of the crotchet to the test. It answered beyond my utmost expectation, and I was enabled to bring away the whole of the contents of the womb with comparative ease. Four pups were extracted; and while I compared them with the little animal from which they had been removed, it required the evidence of my senses to convince me that the disproportioned mass had been forced through the narrow passage of the Italian greyhound's vagina. The pups were all dead. Each bore the well-marked character of the Russian, and by their size indicated their sire; nor was that size decreased by their having been retained a week beyond their usual period.

So far my labour was accomplished; but the appearance of the bitch indicated that all had been done to little purpose. The pulse began to decrease in number, and, nevertheless, continued hard and jerking—the eyes became fixed—the jaw closed—the head pendulous, and all the symptoms of approaching death were exhibited. I tried to support the system; but the poor animal died in spite of every attention, and the examination after death shewed the womb to be intensely inflamed.

It was with some anxiety that I looked for injuries and abrasions, scarcely deeming it possible the violence I had necessarily employed had not lacerated the delicate structure with which the instrument had been in contact. Not a mark which I could attribute to the crotchet was to be discovered. I have seen fearful wounds made by the forceps used to deliver the bitch; but here, in the most desperate case of the kind which I had ever undertaken, was not a scratch or a bruise to be detected.

I have since confirmed the indications of utility which were given by the crotchet on the first occasion of its employment; and had I not received such proofs in its favour as appeared to be conclusive, I should, perhaps, on the results of a few cases only, have hesitated to introduce it to general notice. Besides the instances before alluded to, I have employed the instrument on four occasions—three times in my own practice, and once at the request of a practitioner whose name it is desired I should conceal. Two of the cases were successful, so far as the bitches were concerned; one, which was evidently sinking when brought to me, was delivered of a pup in a decomposed state, and died five hours afterwards, the post-mortem displaying acute peritonitis; the other, which I attended to yesterday, was alive when I last saw it; but I am of opinion its hours are numbered. The pulse is hard, but not quick—the animal restless, and the eye dull: worse symptoms

can hardly be present. The poor beast had been left too long unassisted for help of any kind to be of much avail.

Of the pups brought forth by the aid of the crotchet the majority were dead; indeed, though safe to the mother, the instrument is apt to be fatal to the offspring. The numbers stand thus:—dead when extracted, 7; mutilated when brought forth, and immediately destroyed, 1; alive, 1. Thus the proportions are as 8 to 1 against the probability of saving the pups; but it must be remembered, that the calculation is made from cases of which the majority were by previous delay rendered hopeless, and under fairer circumstances the result might have been different.

I will now proceed to describe the crotchet, and explain the manner in which I have employed that instrument. It has been long known to the human accoucheur, but by him is not employed save under certain conditions. A piece of stout steel wire constitutes its substance. The wire, about twelve inches long, is flattened at one extremity, and both ends crooked and made perfectly smooth or blunt, the flattened hook being the smaller of the two. For the dog, the instrument must, of course, be proportioned to the passage through which it is to be introduced, and as the pup, in consequence of the weakness of the abdominal parietes in the bitch, often is felt lying below the level of the symphysis, a dip or lateral bend is given to hooks.

So simple is the crotchet, which ought to be highly polished, in order to secure its being perfectly smooth. It is first warmed and greased, then introduced with the index finger of one hand while the other guides the instrument into the womb. The fœtus is to be first felt, and this is the more readily done if an assistant supports and compresses the abdomen. When the finger has ascertained that the pup is favourably placed, the hook (and I generally use the flattened extremity of the instrument) is to be pushed forward and then retracted until the operator is aware that a firm hold has been obtained. The purchase being secure, the finger is to be employed to keep the fœtus from escaping by pushing it against or towards the point of the crotchet and holding it there. Traction is now made steadily and in the proper direction, and the assistant at the same time, by manipulating the belly, facilitates the delivery of the bitch, which should be in a standing position—not upon its back.

The directions are not very complex, but they must not on that account be disregarded. By introducing the finger, and taking care that its extremity correspond with the point of the instrument, a great object is gained by securing the pup more firmly: yet there are other advantages also obtained by this mode of operating. The head of the fœtus is generally too large for the vagina, and hence the difficulty of its expulsion but by the employment of an instru-

ment which is simultaneously to pass we appear to be increasing the obstruction. However, by compressing the head with the end of the finger it is in some degree forced to conform to the diameter of the passage, which the gelatinous development of the pup at the time of birth readily enables it to do. Moreover, the hazard of injury being done if the instrument should lose its hold is guarded against; for should the hook slip, the point would be received upon the end of the finger before it could catch the soft parts. However, the operator will feel the hold giving way long before it is entirely lost, and will be enabled to rectify the occurrence in the majority of cases before there is a chance of accident. The finger, therefore, becomes a sensible guide to the operator, and by its employment the traction is rendered more firm and steady. But above all, care should be taken to have the instrument perfectly blunt, and the beaks of the hooks not too long. A sharp point might, at the first glance, seem more likely to answer the purpose in view; but its employment would be attended with danger, and on being tested it would be found more apt to tear away. In fact, the sharper the point, the less firm would be the hold, since the substance to be secured is somewhat of a pulpy nature; whereas, by using as broad and flat a point as possible the force is exerted on a larger surface, and the grasp is proportionably the more likely to be retained, the object being not to rend the fœtus or tear it away, but to gently pull it through the vagina, using only so much violence as the judgment assures us is imperative for the accomplishment of the purpose.

My present paper has extended to such length, that I shall be occupying too much of your valuable space if I attempt now to dwell upon the proper time for resorting to the use of this instrument, or the means which ought to be tried before it is employed. These are matters which I fear have been too little thought about; and yet by not properly attending to them, the power to shew our ability in overcoming an obstacle may be the means of creating consequences that shall prove worse than those which have been destroyed. The best instrument is a dangerous weapon in unskilful hands, and should never be touched save by him who has learnt to interpret the symptoms which announce its employment to be necessitated.

To that part of the subject I will, with your permission, devote a future paper, and conclude the present by some remarks upon a matter in which the profession is deeply interested; viz.

ON THE EFFECTS OF INHALATION OF THE FUMES OF ÆTHER

ON DOGS AND CATS, AND, BY INFERENCE, ON THE HORSE ; WITH
THE PROBABLE UTILITY OF SUCH IN VETERINARY MEDICINE.

WHEN the great American discovery was first announced, every veterinarian must have speculated upon the applicability of the process to the lower animals. Doubtless many experiments have been made by various parties, and I have tried the ætherial fumes on both dogs and cats. I placed the sulphuric æther in a Florence flask, to the neck of which a large bladder was secured. The head of the animal was then introduced into the bladder, and a spirit lamp applied to the flask. This answered very well ; but Mr. Lucas has attained every result with a more simple and less fragile apparatus.

A large dog, a cross between the Newfoundland and English mastiff, was obliged to inhale the fumes. Six drachms of sulphuric æther were used. The animal resisted violently. After twelve seconds it began to gasp, and uttered sounds between a cry and a bark. By the thirtieth second the power to struggle was lost in the limbs, though the head was still endeavoured to be withdrawn. The urine was discharged freely in great quantity. In forty-five seconds the dog was quite still, and to every appearance dead. A small sac, containing about half an ounce of inspissated pus was removed from the shoulder, and a suture introduced, before the animal exhibited any signs of life. It then gasped at intervals, and ultimately became conscious. The breathing was much quickened ; the pulse could not be felt. As the dog regained its sensibility it had a great desire to escape, and, being held, resisted with all its strength. At the expiration of ten minutes it was more quiet, and in half an hour seemed perfectly restored.

A small Scotch terrier, having no disease, was subjected to the process for experiment. In fifty seconds it was perfectly narcotized. The breathing ceased ; the heart could not be felt to beat. For one minute and seven seconds it remained apparently without life. The mouth was covered with foam, and both the fæces and urine had been voided during the first struggles. The animal first gasped feebly and at long intervals. When the breathing became more regular a sobbing sound was made for a short time, and the animal, after this had ceased, by the eye shewed it was conscious when its master spoke to it. In eight minutes it tried to rise, but

could not. Shortly, however, it raised itself upon its side and looked around. In twenty minutes it had recovered, but remained in one corner of the room, evidently not desirous of being disturbed.

A spaniel of moderate size, eleven months old, was next experimented upon. The dog resisted much, and cried loudly in a convulsive manner. The foam from the mouth was very copious. At the expiration of a minute and a half the animal was not rendered powerless. Four drachms more of æther were introduced into the flask, but the narcotism was not rendered thereby complete. After another minute had elapsed the dog was released. It lay upon its side, panted irregularly, gasped spasmodically, and soon broke into a jerking yell, which in two minutes subsided, and then the head was beaten against the table with much violence. When the animal got upon its legs it could not walk straight, but fell after it had moved a few paces, which always took a circular direction. Water and meat were refused with evident disgust. A quarter of an hour passed before the dog by any sign denoted that it could recognize its master's voice; but in ten minutes subsequent to this it was as lively as before the experiment.

Three terrier pups were next made to inhale the fumes. They were all of one litter, and six months and three weeks old. As the symptoms displayed in each were similar, so one report will serve for the three. The usual resistance was exhibited; but the cries during the time of breathing the vapour were loud and piercing. The animals seemed to suffer more than any of the older dogs which had been subjected to the process; but the effect was more speedily induced. One was powerless in seventeen seconds; but this was the one most quickly acted upon, the others not being narcotized before twenty-two and twenty-seven seconds had expired. They each continued in a comatose state about four minutes, and then slowly recovered. The return of sensibility was accompanied with every indication of agony: the cries, at first broken and short, at length became long and sharp, the poor little things making violent efforts to get upon their legs, which were constantly employed as the creatures imagined they were running at their fullest speed. The symptoms reminded me of the human being when recovering from an epileptic fit of a severe character. The effects were long subsiding, and it was full two hours before the animals were perfectly restored. During the insensible state, the ears were cropt and the tail cut; but no sign of sensibility of any kind denoted that the animals felt the operations. As in the former cases, the fæces and urine were expelled.

A cat seven years old and a kitten nine months of age were made to inhale the fumes of sulphuric æther. The older animal was insensible in ten seconds, but continued so only three quarters

of a minute, and then recovered gradually without any marked symptom of pain, but seemed, when sensibility was fully restored, pleasantly lethargic. Wherever it was placed there it continued: meat was accepted when the fifteenth minute had expired. The animal foamed slightly at the mouth, and the urine was discharged. The door was purposely left open, but it was not until an hour and a quarter had elapsed that she leisurely left the room. The kitten was forced to breathe the fumes for three seconds before it was fully acted upon, but the insensible state remained for seven minutes. The breathing was lost—the heart still—the eyelids did not move when the finger was passed over the cornea. The coma was most complete. The first gasp was feeble, and eleven seconds elapsed before another was made. By degrees the inspirations became more full, and by the eighth minute from the first gasp respiration of a laborious description might be said to be established. The legs were moved about spasmodically and the nose held against the floor. The animal began to cry, and continued shrieking two minutes and a half: it endeavoured to rise, but was unable. The urine escaped, and thick ropy saliva hung from the lips. By degrees the kitten got upon its legs, but could not for some time walk, falling whenever it attempted to move forward. When it acquired a certain ability to progress, it kept roaming about, only stopping to apply the paws to its nose. Frequent coughing and sneezing now took place; but at the expiration of an hour the little animal curled itself up and appeared to sleep, in which condition it remained during the whole afternoon: when awoke, however, it accepted meat, but would not move to obtain it. On the following day no effects could be perceived.

The results of these trials are not calculated to inspire any very sanguine hopes. We cannot tell whether the cries emitted are evidence of pain or not; but they are suggestive of agony to the listener, and, without testimony to the contrary, must be regarded as indicative of suffering. The process, therefore, is not calculated to attain the object for which in veterinary practice it would be most generally employed, namely, to relieve the owner from the impression that his animal was subjected to torture. In another light, it is not likely to be of much practical utility. The comatose state is of short duration, and the ordinary operations occupy more time than can by it with safety be secured. There has yet no experiment that I know of been made to ascertain the action of the vapour on the horse; but I cannot anticipate that it will be found of much service to that animal. Its effects appear to be most energetic on the young, and the consequences seem to be also in these most painful and lasting. If, however, the application, which is so great a boon to the human race, cannot be made

to the lower animals, I anticipate it will prove of service in another direction. When a dog has inhaled the fumes, the ether, by the smell, may in the breath of the animal be detected many hours afterwards. This circumstance shews that the agent has been received into the system; and, as an energetic and immediate remedy, I am of opinion it may be beneficially employed for the relief of spasm, impactment, &c.

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ON THE PRESENT CONDITION OF THE VETERINARY PROFESSION.

By W. ARTHUR CHERRY.

“This is, rest assured, the greatest evil in the world. We hate and despise one another; that is, we are unknown to each other.

“The partial remedies which might be applied are doubtless good; but the essential remedy is a general one. * * * * *

“Wherever there is no apprenticeship, wherever apprenticeships are imprudently multiplied, they present themselves in crowds, and offer themselves at a low price, and the manufacturer (public) profits by the fall of wages (charges).”

MICHELET.

I SHALL not make any apology for the remarks which I am about to offer: I address them to the whole of my professional brethren. I do so, because, in all the various conversations which I have had with followers of the veterinary art, there has always been a tone of despondency; a complaining that the country did not acknowledge our claims; that we were not wanted as a profession. These feelings I have never been able to enter into: I know them not. It may be urged that, personally, I have not felt the pressure, the difficulties, under which the standing of a veterinary surgeon can be maintained. Not so; few can know them better or under more varied circumstances. As boy and man have I battled in the ranks for something like a quarter of a century; and it is this very battling which has taught me the fact, that the veterinary profession is one that is called for and has been long wanted by the public; and that the reason of our so long being in oblivion has mainly arisen from causes over which the public had no controul, but which existed amongst ourselves, and which we, and we only, could remove. These causes I shall not now enter into; they would occupy too much space, and are not requisite for my present purpose.

As the Secretary to the Registration Committee, returns have passed through my hands from all parts of the kingdom; and but one conclusion can be drawn from them,—that the veterinary art is any thing but despised, any thing but thought light of. It is all very well to say that “veterinary surgeons,” that is, those who hold certificates or diplomas from the schools, are held but in little estimation, and that every itinerant who chooses to adopt the name is held in as good repute as the “certificated” man. Let those who so complain assure themselves that there is a cause for all this, and probably much nearer home than they imagine. But here is a fallacy on the very face of such assertion. Would these itinerants assume the name of veterinary surgeon without a cause? Assuredly there is one, or they would keep to the original designation of their tribe. Doubtless there was a period when the old “farriers” complained of the assumption of *their* designation, as much as the “veterinary surgeons” do now. The plain truth is, that there is a value in the name, and that it does give a certain stamp, or it would not be pirated.

Look around at those practitioners who have succeeded; and what do you find? Men of industry, knowledge, integrity, and worth—such men as the world delights to honour; for the world is just, and will reward those who seek for honour by honourable dealing. It is these men who have upheld the position of the art; who have given a *name—a stamp of worth—to the designation of “veterinary surgeon,”* as they would to any other term. Do not let us run away with the idea that it is the establishment of the veterinary schools which has done this; they arose out of the wants of the community, and are merely a nucleus from whence the real authors started. The same cause has raised our great seminaries of learning—Eton, Harrow, Rugby, Westminster, *et hoc genus omne*; the sending forth of men who have adorned their respective social spheres.

Let us give honour where honour is due; but, in blaming another, do not let us be blind to our own faults. Depend upon it, the success or failure of our professional body remains with ourselves: it is only by our exertions, individually and collectively, that we can raise ourselves above the competition of quacks or itinerants. Who is there amongst us who is so powerless that he cannot do a something for the benefit of the body at large? I assert fearlessly that none such exists. Every man has it in his power to do a little; and it is by the union of these many littles that great things become achieved.

As a body of men recognised by the state, we have existed but for little more than three years. Can much be expected to be done in such a short period of existence, even under the best of circum-

stances? How much, therefore, can be looked for, when those who have been placed in the management of the affairs of the body corporate by the regulations of Her Most Gracious Majesty's Charter, and by elections at the annual meetings; how much, I repeat, is to be looked for, when every obstacle that disappointment, revenge, or malice, could invent—and carried out without regard to truth or honourable conduct—has been cast in their way? Yet, still, these members of your Council, actuated by one feeling, submitted to personal insult the most gross, vituperation the most uncalled for, at the expense of their time, their money, and their repose; boldly, steadily fought on the battle, and triumphed, because they were in the right,—justice was on their side. But have they triumphed for themselves? No, not in the least. As metropolitan members, their position had been long settled by laws which affect the metropolis almost exclusively: the Charter neither added to their social position, nor would the loss of it take from it. The battle was fought for the BODY of the profession, and the only reward that is looked for, is the support of their brethren at large: let them but rally round them, and all the painful tasks that have been encountered are but as dust in the balance.

Glance only at the statistics of the followers of the art, as shewn by the number of those who gain a livelihood by the practice upon cattle. Whatever name they may be known by, however ignorant they may be, still, if they get their living by it, or even a part thereof, they must statistically be looked at as belonging to the veterinary body. It may appear degradatory to many to hear such a position maintained: but we must not be fastidious; our object is, or ought to be, that of "*regeneration*;" and it is only by looking evils steadily in the face, by analysing, that we stand any chance of getting rid of them. The certificated members number somewhere between twelve and fourteen hundred. The proportion that the quacks, itinerants, farriers, or by whatsoever name they may be known, is underrated at four or five to one certificated member; say 1.300 to 6.500, and I am quite sure that I am far below the truth. Will any one say, after this, that the veterinary art is despised or held as nought in this kingdom? When the public are satisfied, or rather are obliged to put up—for want of better—with such spurious practitioners, and such small numbers of certificated men, it may be asked, how is it the latter are not all employed to the utmost? for that they are not is too true;—but look below the surface for the reason. Can any one be found bold enough to assert that the schools have produced men capable of pursuing the profession as it ought? Have those who are bright exceptions (and there are many) depended on their "College" knowledge? No; they have acquired it in other ways and by other means. Those who have,

unfortunately, depended alone on what was taught in the schools, have failed; they had only a *smattering* of dogmatical theory, without practical ideas; and the public, generally discerning enough where their own interests are concerned, soon found this out; and, as these failures were not isolated, naturally enough charged the same upon the whole of your *College* men: and, finding that they were treated quite as well in the aggregate by the quacks or farriers, with the advantage of having lower charges to pay, they took indiscriminately the one or the other, according as they found them best suited. Such has been the state of tuition, that practitioners themselves have refused to take those young men for assistants whose knowledge was alone derived from the Colleges. That this actually was or rather is the case, I knew of an instance only a few months since. How can we wonder, after this, at *public* estimation?

Having said thus much against, let me endeavour to shadow forth means of overcoming this lamentable state of things. Every one will be able to adopt those measures for amelioration which may be most requisite for his own particular position or locality; but there are a few points I would suggest:—let every *bonâ fide* member of the R.C.V.S. adopt the designation of “Member of the Royal College of Veterinary Surgeons.” It is a long sentence to write, which is an objection; but the initials are not long, “M.R.C.V.S.” This will shew that they belong to the chartered body, and will not be so easy to pirate.

Firmly unite and support every effort to produce better educated men, both generally and professionally; shew to the world that, as a body, we are both able and willing to deserve support; also that the employment of proper men is more advantageous than that of the pretenders. Once establish a name for superior knowledge, and therefore of skill, and all those who now are necessarily practising as pretenders (i. e. under the assumed appellation of “veterinary surgeons”) will never have their vacancies filled up by others from the same class. Depend upon it, ignorance is only, at the best, but tolerated; it never can hold its way with knowledge and skill. On the other hand, the public will never do any thing to support those who do not shew by their exertions their knowledge that they are worthy of it.

Hitherto there has been no rallying point, no means of acting in unison;—there is now both: the Charter has given us this; let us avail ourselves of it, and not allow further time to be lost.

Let us not forget that our kindred, the human surgeons, were once as low, or even lower, than we are or have been; yet by labour, patience, and the constant attendance to the improvement of its new members, what have they become?—one of the first and

among the most important bodies in the state; and though we cannot expect to take an equal rank with them, yet by like endeavours we may come very close behind them, by the inculcation of correct ideas into the minds of those who are entering into the profession, and by giving every opportunity for instruction to those who may be in the position of apprentices; for this, after all, though looked on by some as a derogatory practice, is the only method by which any useful knowledge is to be obtained; and though the medical schools oftentimes do not require it, *we* cannot do so: *they* have large hospitals, dispensaries, work-houses, and that unnoticed but really valuable field of observation which comes under the head of "advice gratis." Besides, it is *man studying man*, and therefore a kindred feeling exists. Not so with us: we cannot have extensive and numerous hospitals: the only dispensaries that can exist are the establishments of private practitioners. As to that which I have put under the head of "advice gratis," it is, practically, a failure. I tried it for several years; but the applications were so few that it, in truth, must be looked on as a mere thing in name; because those who are able, in this country, to keep an animal, are able to pay for what assistance may be required. There may be a few localities in which it may partially succeed, Edinburgh for instance; but I much doubt if it is of the value which has been attributed to it; at all events, it has not shewn by its fruits that much ought to be expected from it.

Again; the medical schools require not less than four years' attendance at the institutions for the sick and in the schools, and the period is being constantly extended: and all this is required to produce one sufficiently informed to commence as a practitioner in a profession easier of attainment than our own. I repeat, and maintain from personal knowledge, obtained by the close and unremitting study in the medical schools of the one for *three years*, and of the other from my very earliest boyhood, that the medical, with all its complications, is easier of attainment than the veterinary art; and with this staring us in the face we have had, for more than half a century, men thrown out on the public with mere dogmatical ideas in the place of principles, without any training in those essentials, trifles as they may seem, yet really of vast importance, and even the erroneous dogmas which they had impressed on them exceedingly scanty (here all the better), and in the place of *years* of study often only as many *months* sufficed for the obtainment of the thing miscalled a "Diploma." For this state of matters there is but one remedy, divided into two portions; first, by apprenticeship to learn the minutiae and handiness of practical knowledge; second, by increased periods of study at the schools to imbibe the

knowledge of *principles* on those subjects which are of essential importance; it being understood that the schools are in the condition to teach what is requisite.

January 12, 1847.

SEQUEL TO THE CASE OF LAMENESS.

By E. N. GABRIEL, M.R.C.S. and V.S.

IT was not until the most decided opinion had been reiterated again and again, that the slightest appearance of improvement had not taken place, and that the case was altogether a perfectly hopeless one, that the kind and considerate owner of the bay horse, whose case was related in the last number, would consent to his old servant being destroyed: it was, however, decided on after another week's trial, and within an hour after his death I attended to the post-mortem examination.

After the abdominal and pelvic viscera had been removed, I commenced a careful dissection of the hip joint; and could the young aspirants to our profession—ay, thanks to the Charter, we may so designate it without meeting with a sneer or a curl of the lip, now—have felt with what ease and gratification I went through, so many years later in life, the oft-repeated task of the dissecting-room, they would make themselves as familiar with the scalpel as, to my great annoyance, I perceived from the polluted state of the atmosphere on a recent visit to the lecture-room, they are with their filthy pieces of clay and sottish screws of tobacco. Ten minutes sufficed to shew that “we three merry men all,” but too truly in this case more merry than wise, were all in the wrong; that we three, at least Clines, Coopers, or Listons—we must go to our sister profession for an illustration, for, alas! I know not the name in our own, standing out as a “bright particular star,” that could have conveyed an equally appropriate idea of what we thought ourselves—were all mistaken. The only consolation we had was,—although it is really too bad on such a subject to go back to childish days and childish games for an illustration, but then children and fools speak the truth, it is said; and if they do so but half as often as wise men miss doing so, well do they deserve the praise—the only consolation, I say, was, that we were “burning;” in other words, if we had not discovered the actual seat of the injury, we were very close upon it, “mais revenons a nos moutons.”

On removing the layers of muscle and exposing the joint, the first error detected was, that there was no relaxation of capsular ligament nor elongation of the round one, for the joint externally presented a perfectly normal appearance: a single incision through the capsular ligament disproved the second opinion, a fracture of the head of the thigh bone, for that was found uninjured; and a single movement of the joint destroyed all my own hopes of pre-eminence in judgment, by proving the ligamentum teres as firmly attached as any connecting medium in the body. The limb was now removed without the nature of the injury having become apparent; but, on grasping the acetabulum to ascertain if its edge was intact, the cause was at once discovered, for the acetabulum was as perfectly moveable itself as the head of the thigh bone should have been in it. A little more careful dissection, to lay bare the surface of the pelvis altogether, shewed the mystery; the rami of the ilium and the ischium, which support the acetabulum *in situ*, were fractured, and the cavity of the joint had been lying perfectly moveable in the mass of muscle by which it had been surrounded. The loss of the *point d'appui*, so perceptible during life in the want of command over the lateral motions of the limb, was at once accounted for; and we had the satisfaction of finding that, although we had missed the precise nature of the injury itself, we had not erred in indicating the immediate spot where that injury had been received. The muscles lying immediately on the surface of the bone had been ruptured simultaneously with the fractures, and it was the entanglement of some portion of their fibres between the fractured portions of the bone which had prevented that crepitus which would at once have indicated the nature of the case. A trifling ecchymosis in the surrounding tissues completes the account.

There was not the slightest appearance of any effort on the part of Nature to repair the injury; the fractured surfaces were as rough and ensanguined as if a few days only, instead of between five and six weeks, had transpired. No deposit whatever had been thrown out; and even had there been, the entangled portions of the muscular fibre must have prevented any adhesion taking place. That the nature of this accident had not been discovered by the very careful examinations made per rectum during life, nor had been removed after death, must be attributed to the very beautiful and effective manner in which the inner surface of that cavity is lined by its numerous ligamentous and fascial tissues, which, it would thus appear, go far to support the relative position of the surrounding parts, and partly, also, to the fact that the inner edge of the pelvis remained intact, so that no lesion could be discoverable by passing the hand around it, per rectum.

To conclude, I have not hesitated to lay this error of my own and of two other professional brethren before the profession at large, feeling confident that it is only by means of equal and mutual candour that an insight into cases "few and far between" can be acquired. Should I be asked the question, Who are those who participated in your error? I simply reply, that I do not choose to give the information; for if I think proper to fling my own blunders and want of judgment before the public, "that's my business;" but it is not my business to expose and sneer at the mistakes of others, at any rate those who make them, when they in implicit confidence and unreserved good-will endeavour to assist a brother-practitioner with their opinions. Were this practice a little more frequently resorted to, were we now-and-then to condemn ourselves instead of carping at and detracting from the acquirements of those with whom we may be acting in concert, we should do more to advance the status of our profession than all the privileges and immunities at the present moment so anxiously sought for can accomplish.

ON THE HORSES OF ENGLAND.

OBSERVATIONS ON THE PRESENT AND GROWING SCARCITY OF GOOD HORSES IN ENGLAND. ALSO ON BREEDING HORSES; WITH SUGGESTIONS FOR THE FORMATION OF A NATIONAL BREEDING ESTABLISHMENT.

By WILLIAM GOODWIN, *M.R.C.S.*,
Veterinary Surgeon to the Queen.

IT is an admitted fact by all those who are conversant with the state of the horse-market in England, that good horses were never known to be so scarce as they now are. It is unnecessary to dilate upon the importance of remedying such an evil, and I therefore proceed at once to endeavour to point out the causes which have, only of late years, combined to produce such a scarcity. They will, in my opinion, be found in the circumstances of this country having been drained of too many of its three-parts-bred mares, which has diminished the production considerably, it being now the constant practice of foreign dealers to attend all the best fairs, and purchase by far too many of the first-class horses.

Comparatively speaking, there is not the same scarcity existing in other classes of horses; for I believe London never possessed more beautiful carriage-horses than are now to be seen in the metropolis during its season. Cart-horses are as plentiful as formerly; troop-horses are about the same price that they have been for years,

and are as readily obtained ; machiners may be a shade dearer than they were before omnibusses were in fashion, but still there is no great inconvenience experienced in their market.

But go into the stables of our metropolitan dealers, and you will find them, one and all, complain that the sort of horse I am particularly alluding to is not to be bought, offer what money you may ; and it is evident they are not to be met with in the metropolis. Twenty years ago, a purchaser would have had no difficulty, when looking into the stables of Messrs. Anderson, Dyson, Elmore, Tilbury, Sheward, and others, of finding, at least, some fifty two-hundred-guinea horses for his inspection. He may now look in vain for a tenth of that number, and still be disappointed : it being but too true that the superior riding horse, or valuable hunter, has become almost a *rara-avis*, as compared with former days.

It must ever be a source of national pride, as well as profit, to possess a superior breed of horses ; yet, unless some means be devised, and that shortly, and carried out successfully, we shall not for long be enabled to maintain the triumphant name Great Britain has ever indisputably held above all other nations for its breed of superior horses. That such a want of good horses depends but upon temporary causes there can be no doubt. Our pastures are not diminished either in extent or quality ; forage has not been so dear, although now at a high price, as at a period when I recollect to have seen stables full of superior horses in London ; therefore I hope it may be reasonably inferred that, possessing the same capabilities we ever did, it requires but the development of some well-directed energies again to furnish these realms with the requisite supply of superior horses.

The distribution of thorough-bred stallions throughout our provinces has done much for the advancement of the breed of horses generally throughout the kingdom. I recollect my late father remarking, in a stable of thirty-two coach horses at the Royal Mews, not many years since, that when he was in the habit of buying carriage horses of Spenser, in Oxford-street, some five-and-thirty years ago, there was more hair on the legs of one horse of that day than was to be seen in our whole stable of thirty-two horses : so coarse were they, as compared with the horses he was then looking at.

There is no lack of covering stallions, of every denomination, throughout the country ; but, on the contrary, I believe there are more to be met with everywhere now than can find employment ; and so long as the turf possesses its present force, there need be no apprehension of a scarcity in the supply of the best of stallions.

In elucidation of the fact, that England possesses peculiar capabilities for breeding and improving the breed of horses, I may

mention that, many years since, when the Hanoverian cream-coloured stud was sent to this country from Hanover, to prevent its falling into the possession of Napoleon, the stallions and mares were sent to Cumberland Lodge, in Windsor Park, where in a few years their progeny became so large in size that all those we bred here were no longer a match for the small ones in the royal stables, which had come from the same stock in Hanover. After the peace, the whole stud was sent back to Hanover; and then our supply became so diminutive again, from the same mares in Hanover, that we were under the necessity of once more sending for mares, in order to commence afresh breeding the creams in England. In 1834, however, the Duke of Dorset, then Master of the Horse, unfortunately, I may say, determined upon sending back our stud establishment from Hampton Court to Hanover. On the accession of His present Majesty to the throne of Hanover, our supply of creams being no longer furnished from the Hanoverian stud, I was sent to the Continent, in 1839, to endeavour to purchase some creams to recruit our stud at the Royal Mews. After making every inquiry that I possibly could, as to the locality most likely to furnish what might be considered requisite, I proceeded to Saxe Weimar, where was a stud of considerable numbers belonging to the Grand Duke, both of creams and blacks. The stallions I found all too small to be available: none of them exceeded fifteen hands, and most of them were below that size; consequently, I was unable to procure horses, and my purchases were necessarily confined to four cream and two black mares. These mares, still at Hampton Court, are of small size; but the fillies they produced by being covered, by one of our better sized stallions, have now furnished us with colts, rising three year old, standing sixteen hands high, and which will turn out much larger and better horses than we have had in the royal stables for a long period. Thus has an opportunity been afforded of testing both the improvement and degeneration of the same breed of animals under the influence of English soil and climate, as compared with those of a foreign country.

Notwithstanding our peculiar capabilities, as thus demonstrably proved, nothing has ever been done or attempted, upon a large scale, towards the formation of a breeding establishment in the British dominions; and, although it is argued by some that our resources for breeding are greater and more likely to prove flourishing left to individual efforts, I do not agree in such a position: on the contrary, I believe, if our opportunities for experience had been the same as are afforded in many foreign states where governments and individuals possess large studs, that we should have arrived at a knowledge of facts of which we now are lamentably ignorant.

Some years since, when the Earl of Albemarle was Master of the Horse, his Lordship sent me to Cheltenham, to look at a carriage-horse that had been reported to him as likely to make an acquisition to the royal stables. On setting out, I had but little idea that I should find the required description of animal in that part of the country; but directly I saw the horse, I did not hesitate for a moment to make purchase of him, the price being but 110 guineas. He belonged to Mr. James, the livery stable keeper there, who informed me, that an own brother to the horse, equally as fine an animal, had been sold the previous year to Mr. Elmore, who had sold him to the Master of the Horse to Queen Adélaïde, for the royal stables. Two finer horses were never seen; and they were both about sixteen hands three inches high. Now, these horses were got by a thorough-bred horse out of a Welch pony mare, not more than fourteen hands high. Had these circumstances occurred in a stud, the results obtained would have probably led to the repetition of the cross often enough to have elicited some highly important facts.

I recollect that the dam of Selim, Rubens, and Castrel, was a very small mare, certainly not fifteen hands high, and with but little substance; and yet the three horses just named, all by the same stallion—Buzzard—were three of the largest and best horses ever produced in this country.

Foreigners possess more knowledge of breeding than we do, and this serves to guide them in the production of certain colours, and certain classes of animals, they having experience based upon a multiplication of facts, and upon that formed rules of procedure in matters which with us are, at best, left to hap-hazard. How seldom is it that we find any one individual possessing half a dozen brood mares; and then he is probably not inclined to go to any extra expense to have them covered; and the consequence is, that the first horse that happens to travel through his part of the country is the one he appoints for his mares; and, however successful may have been the cross of one year, he finds, the next season, that the same stallion is no longer in his neighbourhood: he is therefore compelled to employ another, let him be ever so objectionable, simply from the circumstance of his travelling the country.

With regard to colour, I must mention a fact that came to my notice in the royal stud at Hampton Court, and more than once. In several foals got by Actæon, their dams having bred foals to the Colonel the previous year, we observed the marks to be those of the Colonel, instead of those of Actæon. Actæon had no white about him, but the Colonel had a white hind fetlock, and a white slip in the face, marks that could not be mistaken; and all the

facts and circumstances were so remarkable and notorious, that no mistake could have been made. This curious result was once nearly leading to some inexcusable remarks being made at Newmarket about a colt, the property of the Earl of Suffield, which was got by Laurel out of Datura's dam, and which so resembled Camel that it was whispered, and ventured to be asserted, that he must have been got by Camel. Now, on a reference to the Stud Book, we find the mare was covered *the previous year* by Camel. The colt was in Rich. Boyce's stable, and the circumstances are, no doubt, still in the recollection of many. I am convinced Mr. Theobald has not forgotten them, he having been subjected to annoyance from some unjust remarks made to him thereupon by a member of the Jockey Club.

There is a most remarkable record of similar occurrences related in the Transactions of the Royal Society for the year 1821. A thorough-bred mare, belonging to Sir Gore Ouseley, was covered by a zebra, and the produce was, as a matter of course, a striped animal. The mare was covered the next year by a thorough-bred horse, in a distant part of the country, and the produce was also a striped animal. The next year the same mare was covered by another horse, and the produce, *mirabile dictu*, was *still* a striped animal. The history of these facts, the paintings of the animals, and the veritable skins themselves, can still be seen at the Royal College of Surgeons, Lincoln's Inn-fields.

By some breeders we are told that we must attend to the selection of our mares if we mean to breed good horses; and no doubt much advantage is to be derived from a knowledge of the requisite qualifications on the side of the mare. But in some countries the stallions, where improvement is sought, are more thought of, and selected with greater care, than the mares; and I have heard it argued by foreigners, that such an indication is decidedly pointed out to us, when we look at the circumstance of mules always partaking more of the nature of the sire than of the dam; and this is certainly very remarkable in the equine species; for look at the produce of the mare got by an ass, and we perceive the long ears, the donkey head and tail, and all the characteristics of the ass; whereas the animal got by a horse out of an ass has, *vice versâ*, small ears, head like the horse, bushy tail—not like the ass's, which more resembles that of the cow—and legs, and other parts of the frame, all partaking more of the character of the sire.

It is an observation very frequently made, that there is great uncertainty in breeding; that one year we succeed in breeding not only a good-looking animal, but also very good ones in nature; but that, the next year, we prove just as unfortunate, in getting

some mis-shapen or bad-hearted beasts, such as, if on the turf, turn out but an expense to their owner. I recollect hearing a member of the Jockey Club state, that one year it so happened that Comus, a celebrated stallion, had but a very limited number of mares, and that the produce of that year was most remarkable as having proved all good horses.

In pursuing the history of phenomena of this kind, to which so little attention has been paid, I feel I am diverging from the path I had on setting out intended to follow, and to which I must now abruptly return; and I do so, by throwing out a suggestion for the consideration of those better able to judge of the matter than myself, whether some means might not be adopted for the formation of a breeding stud, and on a scale of something like national dimensions; an establishment that would supply the acknowledged deficiency of a particular class of horses now so much required, so as once more to furnish our markets with good horses, as well for foreign as home consumption.

To me it appears extraordinary that, in this age of speculation, we have not had some "company" formed for so noble a purpose; for, as a source of profit, I believe that, with sufficient means and an efficient governing body, both capital and interest so embarked might be lucratively employed and secured. I am anxious to draw the attention of horse-men to the subject, to endeavour to elicit from them any remark that may either elucidate or invalidate opinions I have long entertained. To the members of our profession I would recommend the subject for their serious attention; since, in these days of locomotives, were such establishments but to afford them more valuable objects for practice, it would be for them a sufficient consideration. But there are so few of us who are not horse-men, as well as horse-doctors, that I feel secure in the persuasion of their possession of that *amour propre* which would alone urge them to make every effort for again placing us in that proud position, as breeders of horses, which we vainly hope will be one day accomplished. The geniality of soil and climate in England are such as no other country appears to possess; hence the necessity of foreign studs constantly requiring renewed supplies of original stock from our market. Let the experiment be tried of a sale of some five hundred four-year-old colts, and let Europe be apprised of the opportunity it would afford for making purchases, and I am much mistaken if the competition it would produce would not prove profitable in no small degree to any stud company.

A plan for carrying out the establishment of a stud on a large scale has suggested itself to me, which I may at some future day submit to the consideration of the public through your pages; meanwhile, believe me,

R E V I E W.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

AN EASY INTRODUCTION TO CHEMISTRY. *By* GEORGE SPARKES, *late Madras Civil Service*. Second Edition, pp. 182. Whittaker and Co., London. 1846.

To the youthful mind the portals of learning can hardly lie too wide open, or present too inviting an entrance. The steps leading thereto should be direct of approach and facile of ascent; and cheering prospects should entice the student onward through the various departments of the particular science or art he may be in the pursuit of, until he shall have possessed himself of that quantum of knowledge which of itself will prove to him a sufficient stimulus for the acquirement of more. Beautiful and edifying as the phenomena of chemistry must appear to every one who has arrived at any degree of mastery of the science, not a few persons, we are apprehensive, have felt dismay at the outset of their study of it, and some to a degree to deter them from proceeding, by the array of hard names and difficult problems set forth in the very first chapter or section of some “elementary” or “introductory” work put into their hands. Instead of simple elements, and plain and to them intelligible introductory language, at the beginning, they find themselves beset by “equivalents,” and “symbols,” and “formulae,” requiring calculations which they are not in a condition to make, or, if to make, not to understand; and the result is, that the book, and the science along with it, are cast off in distaste, if not in disgust.

The present “Easy Introduction to Chemistry” has not only steered clear of this too common fault, but in the kind and quantity of matter it contains, as well as in the style in which the same is couched, has, according to our notions on the subject, much to recommend it to the notice of the student, and we may say to the veterinary student, his chemical knowledge not being required to be deep, so much as fundamental and communicable. Indeed, to anybody having the slightest turn for a knowledge of what may be called *popular chemistry*, this little work cannot fail to prove a pleasing as well as an instructive companion. And, therefore, we can feel no hesitation whatever in awarding to it, as a step-stone to chemical science, our full meed of approbation.

The Chapter (V) treating "Of Earths," being but a short one, we shall extract it entire, and thus enable our readers to judge for themselves of the merits of the work :—

"The crust of this globe, diversified as it appears, is formed of a very limited number of earths. These, when pure, are always white; and the varied colours which we observe in minerals are owing to the presence of metallic oxides.

"The earths of more usual occurrence, and possessing the greatest interest, are silica, alumina, lime, magnesia, baryta, and strontia.

"Flint is SILICA nearly pure; quartz, still purer; sand, the same substance in another form. The amethyst, topaz, and chrysoprase, are but coloured varieties. United with either of the fixed alkalis, silica forms glass, which you may make with the blow-pipe by fusing together a few grains of sand and a little carbonate of soda. In this operation you will observe the soda sink into the charcoal. Enough, however, will be left on the surface to vitrefy the sand.

"In order to render glass more fusible, several substances are added in the manufacture, the principal of which is oxide of lead. This makes the glass more brilliant, but at the same time more soft and liable to scratch. Tubes of this quality are much the cheapest, and answer well enough for all ordinary experiments; but we can neither expose them to a high heat, nor attempt in them any metallic reduction. For such purposes it is necessary to employ hard German glass, which is made with potass, and perfectly free from lead. The use of manganese in glass-making is to convert any iron that may happen to be in the materials from protoxide to peroxide, and thus to get rid of the dirty green colour produced by the former. Hence, manganese is sometimes termed glass-soap. Too much of it, as already remarked, produces a purplish colour.

"When a great excess of alkali has been used, the glass is soluble in water; and from a solution of this kind, left undisturbed for several years, small crystals of silica, resembling rock crystal, have gradually been deposited. Even common glass is slowly decomposed by water, more especially at a boiling heat; and some kinds, if finely powdered and placed upon turmeric paper, with a few drops of water, will part with enough soda to change its colour. In stables and other places, where the air is loaded with ammoniacal vapours, glass is rapidly decomposed.

"Glass was known to the ancients. Among the ruins of Rome fragments are constantly met with of all colours; and some of them have a flower or other pattern running throughout their substance. In Egypt also imitations of the amethyst, emerald, and topaz, have been discovered.

“ Although silica is the most abundant ingredient in clay, yet the peculiar plasticity of that substance is due to the large admixture of another earth, viz. ALUMINA. This, when pure, is infusible in any furnace; but, when mixed with silica, either artificially or (as in clay) naturally, it undergoes an imperfect fusion, and forms porcelain or pottery, differing in quality according to the purity of the ingredients employed. Common clays generally contain iron; and from the oxide of this metal bricks derive their red colour. For the best kind of porcelain no sufficiently pure clay can be found among, what are termed by geologists, the secondary strata; and recourse must always be had to the primitive rocks, which furnish a perfectly white material, derived from the spontaneous decomposition of felspar. Clay fit for such uses should form with water a tenacious mass, soft enough to receive the minutest impressions, and so devoid of elasticity as to retain them unaltered in drying, and even up to any degree of heat. The glazing used for earthenware is of various kinds: the best is finely-powdered felspar; but coarse articles are generally glazed with a mixture of silica and oxide of lead. Porcelain jasper is a natural production, which owes its form to the action of subterranean fires. The ruby and sapphire consist chiefly of alumina.

“ LIME, which is another of the earths, may be obtained in a tolerable state of purity by burning either chalk, limestone, or marble. Its usefulness as an ingredient in mortar, and also as a dressing for land, is too well known to need more than a passing allusion. When ignited it shines with a very bright light, which may be seen by directing the flame of a blow-pipe upon a fragment of chalk. Lime is slightly soluble in water, but the solution, though clear at first, is gradually decomposed by the air, and the lime falls down in the form of chalk. The addition of sugar materially increases the solubility of lime. Steel goods, dipped into lime-water and dried, are said to become less liable to rust. Marls are clays which contain chalk, and may be recognised by the effervescence which ensues when vinegar is poured over them. When a little water is added to quick-lime they unite with great heat, the water is solidified, and the lime slacked. Compounds of this nature, with which water enters as a constituent part, are termed HYDRATES: thus, slacked lime is a hydrate of lime.

“ MAGNESIA is found native in white masses, and, in combination with the sulphuric and muriatic acids, exists abundantly in sea water. Sometimes it is contained in limestone; in which case the latter is unfit for manure; because magnesia, instead of slacking as lime does, remains caustic and injures vegetation. Magnesia is insoluble in water.

“ Of BARYTA and STRONTIA nothing more need be said than

that they resemble lime in appearance, and that the minerals which are chiefly composed of them are remarkable for their great weight.

"Silica is the only vitrifiable earth; the others are termed alkaline, from the great resemblance which their properties have to those of the fixed alkalis. Like these they are antacid, and in most cases convert vegetable blues to green. This identity of properties naturally caused a suspicion of an identity of composition; and subsequent galvanic experiments proved that all the earths, not even excepting silica, are the oxides of bodies more or less resembling the ordinary metals, and which have been called, after the Latin names of the corresponding earths, silicum, aluminum, calcium, magnesium, barium, strontium, &c. Thus we see that fixed alkalis, earths, and metallic oxides, are only three divisions of one great class."

OBITUARY.

DIED, suddenly, on the 9th ult., at his house in Osnaburgh Place, New Road, Regent's Park, in the 71st year of his age, WILLIAM YOUATT, Esq., M.R.C.V.S., late Veterinary Surgeon to the Zoological Society, Editor of "THE VETERINARIAN," and author of "The Horse," "The Ox," "The Dog," "The Pig*," "Humanity to Brutes," &c., &c.; sincerely regretted by all his friends and acquaintance, but especially and deeply lamented by the members of that profession of which he was, for thirty years of his laborious and useful life, a distinguished and beloved member.

* On this work Mr. Youatt was engaged at the time of his decease; and, fortunately, had sufficiently advanced it to enable the publishers to lay it, ere long, before the public.—ED. VET.

THE VETERINARIAN, FEBRUARY 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

THE professors and patrons of veterinary science deplore the loss of Mr. Youatt. For thirty years he assiduously, fondly, unceasingly laboured, in the cultivation and improvement of the veterinary art in all its various branches; and, need we add, with no ordinary success has such unexampled assiduity and zeal been ultimately crowned. He was ever the friend—the tried and proved friend—of every professional brother; accessible at all times and under all circumstances; ready always to aid in the season of need, were the want professional or were it private; known equally to all for his benevolence, his kind-heartedness, his humanity, his talent, his skill. Nor was he the friend of his professional brother alone. He was no less the friend of his patient—the poor, dumb, suffering brute!—whose appeal was never made to him in vain. He did, in truth—to use a quotation he seemed to have taken as his motto—

“Cast round the world an equal eye, and feel for all that live.”

The name of YOUATT will take a high place among those of the contributors to veterinary and zoological science, and will long live in the minds of his professional brethren.

In our present number will be found some valuable papers: those of Mayhew, Cherry, and Goodwin, in particular, will attract notice.

Mr. SMITH's singular case of lameness from disease of the liver is one more instance to shew that the pain in or between the shoulders, so commonly felt from hepatitis by man, may likewise exist in the horse from the same cause, and so prove the occasion of lameness; and the circumstance of the lameness being in the *near* fore limb, instead of—as in all preceding cases—being in the *off*, renders the case, so far, unique. But we do not view

the case, as Mr. Smith seems to do, in the light of any answer to Dr. Brauell's question—"Does not *PODOTROCHOLITIS* occasionally arise from internal causes?"—the lameness in Mr. Smith's case, we should say, having nothing whatever to do with the navicular joint.

Mr. GABRIEL'S case has turned out satisfactorily; if not to the owner of the horse, at least to the medical attendants and advisers upon it. Dissection proved that it was one of those "unfortunate" cases that stand without the pale of poor human aid; and, moreover, afforded substantial reasons why, during life, its nature had been involved in so much mystery. And yet there was a shrewd "guess" or two made—and times, too, when those who were hunting about for the hidden fact were burning hot upon it. Interesting as the case is in a medical point of view, the pleasure of its perusal is not a little enhanced by the quaint and graphic language in which it is clothed.

Mr. MAYHEW'S account of his experiments on dogs and cats with the vapours of æther will be read with eager interest; everybody—every veterinary surgeon at least—being desirous of knowing to what extent the American discovery is likely to prove useful or available in veterinary practice. For our own part, after perusing Mr. Mayhew's interesting cases, we must confess we augur more favourably of the inferences deducible from them than he would seem to do. To us it appears questionable whether the cries emitted by the animals during the experiments are to be regarded as "evidence of pain." Looking to the like experiments which have of late been made on men, we find that a good deal has been said and signified by signs by some of the patients under inhalation, which has been mistaken for consciousness, when, in fact, as has been shewn afterwards, by the operations being proceeded with, the subjects of them were all the while insensible to pain. Future experiments will clear up this point, and, no doubt, elicit much of which we are yet ignorant. And it will give us pleasure to hear from any gentlemen who may have opportunity and inclination to enlighten the veterinary community on so interesting a topic.

The Canadians are far behind the English in horse-flesh. And yet it is not out of our remembrance how our "knowing-ones" were startled at the performances of some American trotters who came over into this country. It would appear, however, from Mr. Charles Percivall's narrative, that this "trotting" amounts to a species of *ambling*—something, perhaps, analogous to the hitching pace so common with our butchers. If this be the case, no wonder Master Yankee diddled his good-natured relative, John Bull, so easily out of his coin, as well into a belief that American horses could beat English horses in trotting. This was a "dreadful" cunning trick on the part of brother Yankee; one for which Brother John will, we have a notion, one day "shake his stick at him."

We shall take another opportunity of referring to the papers of Mr. Goodwin and Mr. Cherry; their subjects are too important to be cursorily disposed of. But as for our old friend, Professor Sewell, he has, we must confess, taken us quite by surprise. It is so very seldom now he "comes out," that really the public seem to be forgetting there exists such a person, it being by no means so very rarely that we are asked—"Who is the Professor of the Veterinary College?" and, "What has become of him?" We cordially, therefore, congratulate him on his re-appearance in the same character, and exceedingly compliment him in having made his renewed *debüt* in such a nice, new, creditable dress. Really, Messieurs les Editeurs du Récord have made quite another man of him.

We are not going to pass a syllable of comment on his "Introductory Address," differing as it does little or nothing from the Professor's "addresses" or introductory lectures of former years. But we do marvel—exceedingly marvel—that it contains not one syllable about the Royal Charter of Incorporation. Surely, the Professor of the Royal Veterinary College cannot mean to *disown* the Chartered Body: he might as well pretend to disown the profession. Or is it that he imagines, or has any good grounds for believing, that he will one day succeed in obtaining a Charter for the "College." We will not take upon ourselves to say that no such prospect exists, or may not be realized; but this we will, as our firm conviction, declare—that such an additional charter must, eventually, do the school at St. Pancras more harm than any thing

that could possibly have happened to it. There cannot co-exist *two* professional bodies, and particularly two that are pulling opposite ways. And if the schools are so blind to their own interests as to come to the determination not to acknowledge the Chartered Body, one fine day the latter may take it into their heads to refuse to recognise them.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of December 30, 1846.

Present—the PRESIDENT, the SECRETARY, Messrs. FIELD, ERNES, MAYHEW, ARTHUR CHERRY, J. TURNER, CHERRY, sen., WILKINSON, GOODWIN, and BRABY.

THE minutes being read and confirmed, a letter was read from Mr. George Baker, tendering his resignation as a member of the Board of Examiners, as also the being a member of the Council. A good deal of discussion arose on this subject, some few contending that the resignation ought not to be accepted; but the majority held that, Mr. Baker having tendered his resignation upon private views of his own, it ought to be accepted.

Mr. Ernes, seconded by *Mr. Field*, moved, “That Mr. Baker’s resignation from the Board of Examiners be accepted;” which being carried, it was then moved, “That Mr. Baker be requested to retain his seat as a member of Council:” this was also carried.

Mr. Field then moved, “That a vote of thanks be tendered to Mr. Baker for the able manner in which he had discharged his duties as a member of the Board of Examiners.” This motion was seconded by *Mr. Mayhew*, and carried unanimously.

Mr. Wilkinson’s motion, seconded by *Mr. Arthur Cherry*, “That Mr. Baker’s letter be entered on the minutes,” was, as a matter of course, carried.

Mr. James Turner proposed Mr. Tho. Mayer, sen., as a gentleman in every way qualified to be elected to the vacancy in the Board of Examiners caused by the resignation of Mr. Baker.

Mr. Field, in seconding the motion, spoke warmly in favour of Mr. Mayer’s qualifications for the office. A few general remarks followed from several members, and a ballot shewed that Mr. Mayer was unanimously elected.

A discussion then arose on the vexatious question respecting Dr. Mercer's conduct. No notice had been taken by Dr. Mercer of the letter directed by the Council at their last meeting. A long and somewhat angry debate followed, and the Secretary was directed to write again to Dr. Mercer, expressing the surprise of the Council at Dr. M.'s not noticing the former letter.

[This inquiry would never have taken the late vexatious turn had not some few members chosen to consider it as a personal one, entirely losing sight of the simple fact, that it was an inquiry into the improper discharge of official duties, the person holding the said office being only negatively affected: with the *office* the Council have every thing to do—with the *man*, nothing. It is the same false view of position which has from the commencement been the fruitful cause of disagreements: it is to be hoped that there will now be an end to such errors.]

Sitting of January 14, 1847.

A Special Meeting, called for this and following days to consider and revise the Bye-Laws, of which the requisite notice had been given more than three months since;

Present—the PRESIDENT, the SECRETARY, Messrs. MAYER, sen., ROBINSON, JAS. TURNER, HENDERSON, ARTHUR CHERRY, WILKINSON, MAYHEW, CHERRY, sen., and KING.

The minutes being read, before they were signed

Mr. Arthur Cherry rose, and stated that he felt himself called on to enter a protest against those parts of the late proceedings which relate to the inquiry into the conduct of one of the Examiners for Scotland, Dr. Mercer. He briefly stated his reasons for making such protest. The protest being read,

Mr. Mayhew rose, and stated that he so perfectly agreed with the protest just read, that he must beg to be allowed to add his name to it. A lucid statement of the views which led him (*Mr. Mayhew*) to agree with the course taken by *Mr. Arthur Cherry* was then entered into; after which the protest, with its double signature, was directed to be entered on the minutes; and the President having signed the minutes, the special business of the evening commenced.

The first question was the Apprenticeship Clause. A long and general discussion was then entered into, many amendments were

proposed, and a large amount of practical information was elucidated, especially from Messrs. Mayer and Robinson.

Mr. Mayhew strongly contended for the retaining unaltered the clause as it then stood, and most ably supported his view.

The only difference of opinion arose from the difficulty of adopting some modification of the clause which should meet the views of the large majority. No difference arose on the propriety of retaining the apprenticeship qualification intact.

The discussion ended by the retaining the clause as it originally stood.

Mr. Gabriel gave notice that he should bring in an amendment on that clause for consideration that day three months.

Mr. Arthur Cherry gave notice of motion to consolidate and partly erase Laws 3 and 4, Section 2, relating to the printing of Lists of Members, and to adopt a practical clause in their room.

[We are sorry to be obliged to notice a most improper course adopted by a member at this meeting—a grossly personal and totally uncalled-for attack. We trust that, after the very strong manner in which the majority of the Council expressed its feeling on the matter, it will not again occur.]

Sitting of January 15, 1847.

Adjournment from the evening before.

Present—the PRESIDENT, the SECRETARY, Messrs. HENDERSON, JAS. TURNER, WILKINSON, ROBINSON, MAYER, sen., and ARTHUR CHERRY.

Minutes read and confirmed.

Mr. Arthur Cherry, before the business of the evening commenced, begged leave to lay before the meeting the state of the returns to the registration circulars. He should not have troubled them, had not some unjustifiable and uncalled-for remarks been made by a member of the Council on the former evening. That the number of circulars issued to those whose addresses were known amounted to seven hundred and twenty: of these three hundred and ninety had been returned duly filled up; twenty had been returned from the dead letter office; and that there were now still to be received three hundred and ten. To these must be added those who had received diplomas since

the publication of the old list, and those whose addresses were not known. That he estimated the number of certificated veterinarians at between twelve and fourteen hundred; and that those who were practising without certificates or diplomas at from six to seven thousand; that, under these circumstances, he could but consider that the objects of the Council must be directed to the regeneration of this latter portion, as well as the benefit of the smaller number of certificated men. The Charter was evidently granted for both these objects.

Mr. Mayer withdrew some of the motions of which notice had been given: upon the others much valuable discussion took place, and some very judicious amendments were introduced. We will give them after they are confirmed at the next meeting.

It will not be necessary in this place to give each resolution, as they must all appear in due course; and as there are several notices of amendments, or of new bye-laws, it would be premature to enter on them. We will, in due course, state the nature of the notices as given in by the respective movers. These will be suspended for the required period, viz. three months.

MISCELLANEA.

CASE OF SUPPOSED MODIFIED GLANDERS IN THE HUMAN SUBJECT COMMUNICATED BY INOCULATION FROM A GLANDERED HORSE.

By CHARLES POOLEY, *Esq.*, Surgeon, Cirencester.

ON the 24th September, Charles C —, aged thirty-one, a stout, well-made man, in the service of Lord Gifford, applied for advice under the following circumstances:—It appears that a week before, when engaged in cutting up a horse for the hounds, the knife slipped, and inflicted a slight scratch on his left thumb; and on the following day he killed and dismembered another horse that was unequivocally affected with glanders, the scratch on his thumb not being then healed. The ensuing day his thumb became a little painful and swollen, and, knowing from experience the dangerous nature of the wound, he fomented it frequently with hot water, and applied a large linseed poultice. The third day after inoculation he was alarmed by pains shooting up his arm, and stiffness in the armpit, which, however, gave way to the repeated use of hot

fomentations. On the fourth day the pain shifted to the joints of the thumb, the scratch being perfectly healed: the pain thus continued to shift about to different parts of the thumb up to the day he applied for advice. The thumb now presented a swollen appearance; was very hot and painful; and on the first joint was a circumscribed swelling about the size of a shilling, red, quite hard, and tender on being touched, gradually rising to a small obtuse cone, the top of which was indented, and marked by a yellow spot. The pain, heat, and swelling, did not extend beyond the thumb, and there was no swelling in the axilla. The man's countenance was dejected, and he complained of restlessness and debility: his nights were sleepless, owing to the increase of pain at that time; tongue clean, and rather dry; pulse 90, and firm; bowels regular; is thirsty, and is annoyed by a constant unpleasant taste in the mouth. A linseed poultice was applied; and two grains of opium, along with twelve grains of compound extract of colocynth, ordered, to be divided into four pills, two of which were to be taken each night at bedtime; a draught of the compound senna mixture the mornings following.

26th.—Medicine has acted well; has passed two restless and disturbed nights, from the incessant pain and intolerable heat in the thumb. The pain has affected the tips of all the fingers, and on the fourth finger of the left hand is the appearance of a circumscribed swelling, resembling in every respect that on the thumb. The swelling of the thumb has diminished a little, but it still continues hot and red—pulse 92, soft—tongue clean, and still rather dry—eyes dry-looking—urine natural—appetite capricious. Compound ipecacuanha powder, ten grains, was ordered each night, with a draught of compound decoction of cinchona, \mathfrak{z} vss., and compound tincture of cinchona, \mathfrak{z} ss., a sixth part to be taken every six hours:—linseed poultice continued.

28th.—During the last two nights has slept at intervals, but was frequently awoke by wandering unpleasant dreams: during the day he is tolerably easy, but towards night the pain increases. The thumb and finger are less swelled, the heat and redness the same—tongue clean, less dry—pulse 88, soft—bowels not open—feels low-spirited and languid, and is unable to set about any thing—appetite improved. Ordered to continue the poultice and the bark, and to take two colocynth pills at bedtime.

30th.—The pain in the fingers was better till last night, when the fourth finger became hotter and more painful: his nights are still restless, and he is watchful—complains of headache and dizziness this morning, and of a little oppression in the chest. For several hours, yesterday evening, he suffered from considerable

swelling and tenderness of the cervical and parotid glands: the swelling subsided during the night—bowels open—tongue clean, and moister—pulse 84, soft—appetite good. The thumb still exhibits some swelling and redness, with tenderness, and the finger is rather more swelled and painful than before. Ordered two colocynth and calomel pills to be taken each night—applied nitrate of silver round the thumb, at the base of the swelling, and to the fourth finger:—continue the poultice.

October 3d.—The swelling of the thumb and finger have nearly subsided, and, though stiff and a little painful, he is able to use them a little: sleeps well at night—bowels regular—pulse 78, moderately full, and soft—tongue clean—expresses himself in better spirits this morning, and wishes to go to work. Ordered him to leave off the poultice, and regulate his bowels by an aperient occasionally.

I saw this man several days afterwards, and he assured me that the only inconvenience he felt in the thumb and finger was from stiffness in the joints: he looked well in the face, and was living in his accustomed way.

Remarks.—I rest my opinion that the foregoing case was one of modified glanders upon two circumstances,—the character of the local symptoms, and the disposition of the glandular system generally to become affected; and this is strengthened by the knowledge that many cases are on record to warrant the belief that glanders is capable of being communicated to the human subject by inoculation. The character of the local symptoms differed from those of a simple poisoned wound in the affection shifting its position, and in the appearance of the circumscribed swelling, which was unlike any swelling arising from a poisoned wound that I have ever seen: it more resembled what is called “farcy buds” in horses. The scratch was on the end of the thumb; it was on the joint that the swelling arose: and on the sixth day, without any apparent cause, a similar “bud” shewed itself on the fourth finger. The absorbents of the arm were slightly inflamed at first, and there was a little stiffness in the axilla; and on the tenth day the cervical and parotid glands were swollen and tender for some hours, evidence of the disposition of the glandular system to become affected. It has been asserted that “glanders” is always accompanied by the well-known defluxion from the nose. I am not sufficiently acquainted with the nature of the disease to say whether this assertion may be modified or not; but certainly, in this case, there was no increase of mucous secretion, nor was there any pulmonary symptom to lead to the suspicion that the mucous lining of the air-cells was at all affected, though, on the

tenth day, he experienced a sense of oppression on the chest. The dry-looking conjunctiva, taken in connexion with the thirst and dryish state of the tongue, evince the irritative fever that was creeping on. Notwithstanding the constant use of linseed poultices, suppuration did not take place, but the swelling gradually subsided.

DEATH BY GLANDERS.

ABOUT three weeks ago, Messrs. Wing, grocers and druggists, of Melton Mowbray, had a horse die, which they sold to a knacker named Whitaker, of Melton Mowbray, for ten shillings. Whitaker skinned the horse, and a few days afterwards was taken ill, and kept gradually getting worse until Tuesday last, when he died. It appeared that the horse died of the glanders, and, when Whitaker was skinning it, he accidentally rubbed his head on his hand, having at the same time a small pimple on his head, which caused inoculation and its fearful consequences.

A man named Pick, an old servant of Messrs. Wing, has also died from the same frightful disease, he having had the care and management of the horse until it died; but how the disease was conveyed to him is not known. Another man, named Hawley, who assisted Whitaker to skin the horse, has been taken ill, and it is much to be feared that his is the same disease. It is also reported that some pigs that had lain upon some of the straw that had been used by the horse had manifested signs of the disease.

The whole of the furniture in the room where Whitaker died, consisting of two beds, bedstead, &c. were burnt the same evening that he died, to prevent, if possible, the contagion, by order of the surgeon who attended.—*Leicester Journal*.

We are indebted to a correspondent for the following additional particulars:—The first symptoms of Whitaker having caught the disease exhibited themselves when he was in bed the following night. He complained that his head was as heavy as if a hundred weight was upon it, and that he could not lift it. His wife paid every attention to him, and medical aid was called in, but without avail. The second symptoms were, discharges of foetid matter from the eyes, nose, mouth, and ears, after which the body broke out all over like the small-pox, from which discharges were constantly taking place. A short time before dissolution the body turned quite black, thus exhibiting in every stage of the disease the virulent nature of the infection. Hawley is, we understand, better; but it has been found necessary to destroy one of the pigs.—*Nottingham Mercury*.

CONVEYANCE OF FAT CATTLE.

UNUSUAL labour unavoidably produces a wasting of the animal substance. The practice of driving fat cattle over considerable distances was, doubtless, resorted to in the absence of any means of conveyance whose cost was tolerable; but that it should be continued where railroad or steam-boat transit can be employed must be attributed to blind adherence to usage, and neglect of the plainest principles on which the profit of the parties concerned depend. A long journey will, of course, walk flesh and fat off the bones, where it had been laid with all the skill of the grazier, and at no little care and cost. This fact is presented with the precision and authority of actual experiment in the sailing-bill of the *Enterprise* steamer, which plies between London and Boston. It is there stated that Mr. D. Martin, of Wainfleet, sent five sheep to London to walk the whole distance on the road, and killed five others at home. The two lots were of exactly equal weight (858 lbs.) when alive. The carcasses were weighed when dead, when it was found that the sheep which had walked to London weighed 435 lbs., and their loose fat 60 lbs.; while the five killed at home reached 489 lbs., their loose fat weighing 74½ lbs. The total difference of weight amounted to 68½ lbs., or 14 per cent. of the original weight of the mutton; and this was evidently the loss of meat occasioned by compelling the five sheep to walk from Lincolnshire to London. It is hardly necessary to point out the consequences of this important fact. 14 lbs. of every cwt. of the best of human food are absolutely thrown away in the performance of such a journey by the living animals; not a single human being is benefitted by the waste or the process. To abolish the practice would be equivalent to adding many thousands of acres to the grazing districts of the kingdom, and those of a kind to require no expense for management. Nor is this all. At the end of so long a journey, the animal, unused to effort, is wearied and diseased, and its flesh is, to say the least, less wholesome than it ought to be as human food. There can now be no excuse for the continuance of this practice; or, if some districts still remain unprovided with railways, the want is likely to be very speedily supplied. Steam conveyance, both coasting and inland, now supplies, or soon will supply, every grazing district with the means of sending its living produce, at reasonable cost, to the great seats of population, without waste or deterioration, and without unnecessary suffering to animals destined to die for the sustenance of man. But why should not the advance make another step? Why should these animals be killed in the crowded yards and dingy cellars of the metropolis, where causes of

disease are rife enough without adding to them the unavoidable filth and putridity of innumerable slaughter-houses? The reasonable plan is evidently to send, not live cattle, but dead meat, to great towns and cities, and to locate in the country the processes by which the various parts of the animal are rendered serviceable to man. There the free winds sweep away what would be the cause of pestilence in crowded streets and alleys; and there the *residuum*, of whatever nature, is in its proper place to be applied again to the fertilisation of the earth.—*Railway Bell*.

AN ANATOMICAL DESCRIPTION OF THE HEDGEHOG.

By ALEXANDER PITFIELD, *Esq.*

TWO hedgehogs were dissected—one a male and the other a female. The nose in both was short and round, better resembling the nose of a dog than the snout of a swine. They were of that species of hedgehog termed by Mathiolus, *canina*, one of which partakes of the dog and the other of the hog.

They both had the head, back, and flanks covered with prickles. The nose, throat, belly, and feet were only interspersed with very small and white hair. Hermolaus says that the hedgehog has prickles all over the body except on the nose and paws; but we found this false in one of our subjects, who had no prickles on the belly: those on the back and sides, approaching each other, did entirely cover the belly.

The whole animal was of one colour; the skin, hair, and prickles being of a dark yellowish grey. The prickles were an inch and a half long, and very different from those of the porcupine, for they were somewhat flat, and like to the prickles of the outward shells of chestnuts. The paws were composed of five toes, of which there were three large ones in the middle, and two small ones on each side. They had long, pointed, and hollow claws, of the figure of a pen.

The teeth were disposed in such a manner, that below were only the molares and incisores. These last were somewhat longer than the molares. At the top there were no incisores, but only two canini.

The female had eight teats, or two ranges at the pectoral muscle. The liver had seven lobes, one of which was divided into two. The gall-bladder was in the centre of the two upper lobes, that were largest. Its form was oval. The *venæ lactæ* were white, and apparent in the mesentery. The receptacle of the chyle was large and full. The spleen was laid on the ventricle, to which it was attached by twelve branches from the *vas breve*. The pan-

creas has the same form. It differed only in colour, the pancreas being inclined to white, and the spleen of a blackish red.

The intestines were all alike in substance and thickness. There was not any cœcum.

The bladder was usually an inch and a half in length, and an inch broad.

The lungs had five lobes, three of a middle size at the right side, and two on the left, one of which was greater, and the other less, than all the rest. The heart was almost round. The right auricle was red, or almost black; the left rather white.

The globe of the eye did not exceed two lines in diameter. It had an internal eyelid. Of the three humours of the eye, the crystalline alone appeared, without the aqueous or vitreous humour. The retina seemed to touch the crystalline, and, as it were, adhere to it on that side towards the bottom of the eye, as the cornea covered and touched it before. The uvea was black without the tapetum. It did not, likewise, make any fold on the fore-part to form the iris, so that the eye, when the lids were opened, appeared quite black.

CASTRATION.

CASTRATION has a strange effect. It emasculates man, beast, and bird, and brings them to a near resemblance to the other sex. Eunuchs have smooth, beardless chins and squeaking voices. Wethers have small horns like ewes, and oxen large bent horns and hoarse voices when they low, like cows; but bulls have short straight horns, and though they mutter and grumble in a deep tremulous tone, yet they low in a shrill high key. Capons have small combs and gills, and look like pullets about the head: they also walk without any parade, and hover over the chickens like hens. Barrow-hogs have also small tusks, like sows.

Mr. Lisle, among his boars, had one so fierce that, in order to prevent mischief, orders were given for his tusks to be broken off. No sooner had the beast suffered this injury, than his powers forsook him, and he neglected those females to whom before he was passionately attached, and from whom no fences could restrain him.

The natural term of a hog's life is little known, and the reason is plain,—because it is neither profitable nor convenient to keep that turbulent animal to the full extent of his time. However, a gentleman, a man of substance, who had [no occasion to study every little advantage to a nicety, kept a hand-bred Bantam sow, who was as thick as she was long, and whose belly swept on the ground, until she had advanced to her seventeenth year, at which period she shewed some tokens of age by the decay of her teeth and the decline of her fertility.

For ten years this prolific mother produced two litters in the year of about ten at a time, and once above twenty at a litter; but as there were nearly double the number of pigs to that of teats, many died.

From long experience this female was grown very sagacious and artful. When she found occasion to communicate with a boar, she used to open all the intervening gates, and march by herself up to a distant farm where one was kept, and, when her purpose was served, would return by the same means.

At the age of about fifteen, her litters began to be reduced to four or five.

At a moderate computation, she was allowed to have been the fruitful parent of two hundred pigs; a prodigious instance of fecundity in so large a quadruped.

CORK CUVIERIAN SOCIETY.

The Mayor in the Chair.

DOCTOR Porter read an Essay, the first of an intended series, on the origin of domestic animals, commencing with the dog. He combatted the opinion of Hunter, Bell, and others, that all dogs are descended from the wolf. Granting the perfect similitude of internal organization and the very close general resemblance in external form, together with identity of habits in many respects, it was argued that there is a very remarkable dissimilarity in the conical shape of the face, with the surpassing breadth at the ears. The oblique position of the eyes of the wolf is allowed by all to be a striking point of difference. Professor Bell attempts to get over this, by attributing the upright position of the eyes of the dog to the habit, transmitted through many generations, of following his master and obeying his voice. This has been objected to, on the ground that following a master is not more likely to give an upright position to the eyes than pursuing their prey, as is usual with wolves. The Essay denied that the occasional intermixture which has occurred between these animals is a proof of specific identity; for intermixtures, similar in all facts and consequences, take place between dogs and foxes, likewise with jackals, both confessedly different species. Several instinctive habits of the wolf were chiefly relied on as being sufficient distinction. The most interesting is the attention paid by the male wolf to his offspring, which he feeds on half-digested food that he disgorges for the purpose. This is totally different from any observed habit of dogs. The Essay shewed that, from the earliest periods, various regions have been infested by wild dogs, different from the wolf, and from one another (some of which hold their ground to this

day). From these it was contended all existing dogs are descended. A short conversation ensued, wherein it appeared that the opinions of the other members did not differ materially from those of the Essayist.

Wednesday, December 2, 1846.

PUPILS OF THE ROYAL VETERINARY COLLEGE, LONDON,
Who received their Diplomas in 1846, and became Registered Members of the Royal Chartered College of Veterinary Surgeons*.

April 8th.

Mr. John Mitchell
— Paul Wray Hayden
— Henry Draper

Mr. Alfred Rushall
— Geo. Hayden
— William Deforges

April 29th.

Mr. Wm. Phillips
— Jas. Rose
— John Dunsford
— Edw. Thos. Bass
— Geo. Langisson

Mr. Wm. Allen
— Frederick Arnold
— Geo. Wm. Varnell
— John Mannington
— Geo. White

May 22d.

Mr. Jas. Thacker
— Babington Keyes
— Wm. Emms

Mr. Thos. Poynton Dexter
— Samuel Keay
— Henry Fishwick

June 24th.

Richard Hudson, Drogheda, county Louth
Henry William Hooper, Great Canfield, Essex
William Harber, Birmingham
Arthur Sewell, Strand, London
John Reynolds, Nottingham
Edward Diggory Jones, Shrewsbury

August 12th.

John Booth, Cheshire
William Henry Kent, Bristol
Lewis Edward Tooke Vicary, Cadbury, Devon
Thomas Barrell, Keynsham, Somerset
Christopher Wm. Hawes, Lynn, Norfolk
Samuel Shapperson, St. Petersburg.

* The names of the pupils who graduated in April and May have appeared before. We now add the names of those who graduated in June and August, making a total of thirty-four.



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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, M.R.C.S. and V.S.

[Continued from p. 68.]

NAVICULARTHRITIS.

NO class of persons feel the inconvenience of a defective nomenclature, in any branch of science or art on which they may be engaged, more than writers and lecturers. In titles and names in particular, the obligation to use two or more words to express that which admits of having its signification expressed equally well by one, is a tax they are continually paying; until at length the repetition of the periphrasis becomes so tiresome, that they begin to bethink themselves if they cannot devise some substitute for it in the shape of a single word. It is this consideration, coupled with the one that really it is disreputable to our profession not before now to have had an appropriate name for the disease I am about to treat on, that has induced me to offer for acceptance the one superscribed. NAVICULARTHRITIS—a compound of the radical words *Navis*, or *navis* or *navicula*, Ἀφθρον, and *itis*—literally signifying NAVICULAR-JOINT-INFLAMMATION—is, to my mind, the term we have long wanted. *Naviculitis* means but *navicular-inflammation*, and therefore is indefinite in its signification.

Dr. Brauel, Professor at the University of Cazan, whose admirable Essay has recently been translated and inserted in THE VETERINARIAN, calls the disease PODOTROCHOLITIS; and a very significant and appropriate appellation this is—classically derived, as it is, from πους, a foot, and τροχίλος, a pulley—an appellation only inferior in my mind, for our use at least, to navicularthritis, from the circumstance of one being so much more familiar to our ears and tongues than the other.

DEFINITION.—By navicularthrititis, is to be understood disease of the navicular joint giving rise to lameness.

THE HISTORY of Navicularthrititis will embrace its DISCOVERY and its PROMULGATION. I never myself heard the *navicular* disease or *navicular joint* disease so much even as mentioned before Mr. Turner published his papers on the subject. My study of veterinary science, as a pupil, commenced and ended under Professor Coleman; and certainly never by my teacher, that I have the most distant recollection of, was the word “navicular,” in connexion with or reference to disease, once mentioned. I remember that the Professor attributed foot-lamenesses in general either to disease of the sensitive laminae or to contraction of the hoof; and in my notes of his Lectures I find this memorable passage:—“In nine cases out of ten of what are termed ‘groggy’ or ‘founded’ horses, these parts (the sensitive laminae), in consequence of chronic inflammation, have become altered in structure, effusion of lymph or of bony matter taking place.”

Among the heap of old works on farriery we look in vain for any distinct or satisfactory account of navicularthrititis; though it would appear allusion is made to disease of the navicular joint under the denomination of “sprain of the coffin joint” or “*os calcis*,” or “heel-bone,” the names by which the navicular bone in those days went. The work of the earliest date wherein we find such allusion is that of Jeremiah Bridges, intituled “No Foot, No Horse,” and published in 1752*. He speaks of “A Sprain of the Coffin Joint,” and directs, by way of treatment for it, drawing blood—in the manner we do now—from the foot, and passing a seton through “the hollow of the frog to the pit or hollow of the heel, under the foot-lock joint;” with care “to avoid touching the capsule of the *tendo palmaris*” (*tendo perforans*); and in some cases “drawing the soal;” also, blistering “three or four inches above the hoof;” and, as the “last attempt”—“the actual cautery or giving the fire”—beginning the strokes “two inches above the coronet.” Concluding with the observation, that, “where one horse happens to be really lame in the coffin joint, it is mistaken a hundred times in practice.”

That Moorcroft—as well, no doubt, as Field, senior, with whom he was associated in business, in Oxford-street—knew of the disease, we have his own evidence to shew. In a letter to Captain (now Sir Edward) Codrington, in 1804†, respecting a horse thought, in his own judgment, to be lame from “contraction,” Moorcroft

* No Foot no Horse: an Essay on the Anatomy of the Foot of that Noble and Useful Animal a Horse, &c. By Jeremiah Bridges, Farrier and Anatomist. Baldwin, Paternoster-row, London, 1752. 8vo, pp. 151.

† Published in vol. xix of THE VETERINARIAN, p. 449.

expresses his doubts that it is not "a complicated case" of lameness, saying,—“When an injury has been sustained in the coffin joint*, happening from violent pitching of the limb on a pointed or hard substance, favouring of the foot occurs before any contraction is observable.”——“Your case has features in it which from your statement appear awkward; and I have put you to the expense of this long letter in order that you may form some opinion whether your horse is lame from pure contraction, or from contraction connected with *deep-seated injury of the foot*. The information I have endeavoured to convey, you may, perhaps, not thank me for; however, if I had understood completely the facts heretofore stated many years ago, I should have saved myself much disappointment, and my employers much expense.”

A subsequent letter of Moorcroft's—one he addressed, in 1819, to the editor of the “Calcutta Journal,” on the occasion of being made acquainted with the “discovery” of neurotomy by Mr. Sewell—will serve as an interpretation to the above extracts from his former letter, and satisfactorily, I think, shew that they had relation to the navicular disease:—

“With reference to your paper of the 23d inst., noticing, as discovered by Mr. Sewell, within about eighteen months, a cure for lameness in horses, commonly called ‘coffin-joint lameness,’ I beg to observe that the mode of treatment alluded to, so far from being a discovery of the last eighteen months, was practised by me *about eighteen years ago*.”——“For a long time previous to this period it had been fashionable to attribute most lamenesses in the fore limb of the horse (of which causes were not glaringly obvious in alteration from natural form) to some disease in the shoulder;”—and “on dissecting feet affected with these lamenesses *the flexor tendon was now and then observed to have been broken, partially or entirely; but more commonly to have been bruised and inflamed in its course under the navicular or shuttle bone, or at its insertion into the bone of the foot*. Sometimes, although seldom, *the navicular bone itself has been found to have been fractured*; at others, *its surface has been deprived of its usual coating, and studded with projecting points or ridges of new growth, or exhibiting superficial excavations more or less extensive*.”——“The horse cannot possibly place the tendon in a state of repose or inactivity, except during the time he lies upon the ground; and it is subject to pressure invariably both in his lying down and getting up. This constant exposure to pressure, in addition to the nature of the parts injured, renders inflammation permanent, and prevents coffin-joint lameness receiving permanent relief.”

There are other passages in this lengthy letter I might extract,

* In the “coffin” joint, as will be seen hereafter, is included the *navicular* joint.

did not those I have taken appear sufficient to prove that Moorcroft was well acquainted with the seat and nature of navicularthrititis under the appellation of "coffin-joint lameness;" and that it was, in point of fact, this identical disease to which his letter to Sir Edward Codrington, in the year 1804, had reference.

In 1808, Moorcroft quitted England for India, leaving Field, senior, in possession of his practice in Oxford-street, and Coleman sole Professor at the Veterinary College, by which latter gentleman lectures were continued to be given at the College, without—as I have already shewn—any mention whatever being made of the navicular joint disease: leading us to infer that Moorcroft had imparted none of the knowledge he possessed of "coffin-joint lameness" to his successor, Coleman. Indeed, from the time Moorcroft departed for India, false notions about coffin-joint or foot lameness appeared once more to have gained currency; and as Coleman taught that either contraction of the hoof, or disease of the laminæ of the foot, was the proximate cause of "grogginess," the real or true cause was not likely to be again brought to light unless by some one of Coleman's *élèves*, who—not "pinning his faith upon another man's sleeve"—looked into matters for himself. And such turned out to be the case. The disciple of the Professor who did "look into matters for himself" was Mr. James Turner; and the result of his investigations into the causes of "groggy" lameness was the discovery, afresh, of navicular joint disease. Mr. Turner, no more than myself, possessed no other knowledge than what he had derived from Professor Coleman's "Lectures," or, at all events, was in entire ignorance of what had been seen or done in respect to navicularthrititis by Moorcroft; and, therefore, Mr. Turner became entitled to all the merits of a discoverer; and, wisely, lost no time in making his discovery known both to Professor Coleman and Assistant-professor Sewell. This communication was made in 1816. No reply was given at the time to it by either of the Professors; but Coleman soon afterwards made "ample acknowledgments" of the discovery publicly in his lectures. And this I believe to be a faithful account of the history, comprising the discovery and publicity, of NAVICULARTHRITIS.

Subjoined is a copy of the communication originally made by Mr. Turner to Messrs. Coleman and Sewell; a document which has never appeared in print, and which I should not, but through the trouble Mr. Turner has kindly taken to search for it amidst heaps of other papers, have been able to lay before my readers on the present occasion. Unfortunately, there is no date attached to it: still, the fact of copies having been sent to both the Professors at the London Veterinary College, in the year 1816, will sufficiently attest its age:—

(Copy.)

OBSERVATIONS ON THE DISEASE OF THE FOOT OF THE HORSE
COMMONLY CALLED FOUNDER, OR GROGGY LAMENESS, BUT,
BY MODERN PRACTITIONERS, CONTRACTION OF THE FOOT.

I WAS induced to direct my particular attention and study to this disease, in the first place, because our best treatment and greatest exertions were generally unsuccessful;—secondly, in the course of practice I was frequently obliged, in obedience to the opinion of the day, to pronounce to the owners of horses thus afflicted, that contraction of the foot was the disease, when, in fact, they were often good-looking open feet. This complaint was formerly described by the term *Chest Founder*, supposing it an affection of the muscles of the shoulders and chest, but since the establishment of the Veterinary College, contraction of the foot, considering that from the horny box being diminished in size, its capacity is not equal to its contents, consequently the sensitive parts of the foot receive unnatural pressure : by this alteration in the shape of the hoof modern practitioners account for the lameness, the actual cause of lameness being compared to the pressure of a tight shoe upon the human foot. The result of my dissections was, the discovery of an important joint within the hoof, so much diseased as to be incapable of acting as a joint.

Taking into consideration the extreme pain attendant upon the destruction or merely inflammation in the interior of a joint, it strikes me as being a more likely cause of lameness than contraction of the hoof; therefore, from this and the following practical facts, I entertain a different opinion.

First.—The immense number of horses there are in this country with narrow heels, whose feet are contracted, but not lame; and we have numerous instances of contraction to an extreme, feet so distorted, from the length of the toe and the narrowness of the heels, as to bear no resemblance to the circle which was the original form, and yet go perfectly sound.

Secondly.—We are daily seeing groggy or lame horses confirmed cripples, with feet which, from external form, must be declared good; so fair in appearance, that no practitioner, upon merely taking up the foot, would venture to pronounce it bad or contracted, if he did not know at the same time that the horse was a cripple.

Thirdly.—The hind feet of many horses are much contracted, but we have very few instances, if any, of lameness behind from contraction. I think no practitioner has ever pronounced a horse groggy behind.

Fourthly.—The too many instances we meet with in practice of the obstinate lameness remaining after we have removed the contraction. Many are the instances of groggy horses with contracted hoofs, that after having been at grass for a considerable time, perhaps for a whole year, whose feet have so altered as to have become circular, and every purpose answered except the principal one, the removal of the lameness.

Fifthly.—The sudden manner in which they are frequently attacked with this disease. Horses that were known never to have been lame have become violently lame on the road, suddenly, with this complaint, and never after become sound again to work, and the owner or groom shall not have had the least suspicion that the animal was becoming lame. If contraction were the cause, surely the lameness would, in every instance, take place gradually.

These points induced me to search for another cause for the lameness. By dissection, I have discovered another; and, to the best of my knowledge, it is a disease which has never been described by any author. The seat of it is in the navicular joint of the foot: I mean the joint formed by the navicular bone and the flexor tendon, where the tendon slides over the navicular bone; the circumscribed cavity which is supplied with synovia or joint oil, to prevent friction between the internal polished surface of the tendon and the smooth cartilage covering the navicular bone. The worst stage of the complaint is a total *destruction* of the navicular joint, which is so completely disorganized, that it can no longer act as a joint; there is not a drop of synovia to be found in it. The cartilage covering the navicular bone next the tendon is either entirely absorbed, or else in a complete state of ulceration: the corresponding surface of the flexor tendon, which was before as smooth as the highest polish, has now become rough, and the delicate membrane lining it abraded; and in most of the desperate cases there is a *strong adhesion* of the tendon to the navicular bone. When adhesion is present, there is, generally, besides the loss of cartilage, a loss also of part of the navicular bone itself, a small hole formed in its centre from absorption. In some instances there is an ossification of the parts contiguous, but I have dissected many desperate cases of this navicular disease without any ossification. When the disease is less violent, there is a deficiency of synovia and an inflammation of the secreting membrane; an absorption of part of the cartilage of the navicular more particularly in the centre, and some roughness of the corresponding surface of the tendon: in this milder form of the complaint there is no adhesion of the tendon to the bone.

I have dissected every groggy foot that I have been able to procure: in every instance, without one exception, I have found the

navicular joint diseased. I have found it in groggy feet with contraction, and also to the same extent in good-looking open feet.

It must appear strange that such a formidable disease as this should so long have escaped detection, and, particularly, as the foot of the horse has been a subject of so much investigation. I can only say, that in my own dissection was the first time I ever saw the disease; that I never heard of it, and that I never was taught it. If some practitioners have occasionally met with instances, it appears they have been put by, as cases of rare occurrence. The unfortunate animal is suffering perpetual pain from these delicate surfaces coming in contact, which were never intended by Nature to have touched each other. By the loss of the synovia at this important part these highly sensible surfaces are not only in contact, but, when the animal is in action, they are actually rubbing against each other; and, to make his misery the more complete, they happen to be immediately under the centre of his weight.

JAMES TURNER,
Veterinary Surgeon, Croydon.

THE SUCCESSFUL APPLICATION OF BELLADONNA TO THE OS UTERI IN CASES OF PROTRACTED PARTURITION.

By MR. JOHN YOUNGHUSBAND, Greystoke, Cumberland.

IN one of my professional excursions (in the beginning of the new year), I met with a medical acquaintance, an M.D.; and in the course of our conversation a discourse took place regarding the medical effects of the extract of belladonna, which arose from my accidentally saying that I considered it both an useful and dangerous therapeutic agent, according as its action was well or ill understood. And in the course of the conversation it brought to my recollection two cases of parturition, in which, according to my opinion, I used it with the most beneficial effects.

The first case was that of a fine four-year-old heifer, of the long horned breed, which had gone the regular time of utero-gestation, by outward appearances was well prepared, had severe labour-pains for a good while, yet was there no appearance of her burden quitting her.

The owner, when he came for my assistance, said that he believed it was a case of "horning up of the mouth of the calf-bed;" that she would have to be cut, and, being in great pain, he wished me to attend her as quickly as possible.

"Well," says I, "if it be so, it will be a new case to me, although I have assisted in the extraction of as great a number of calves as most practitioners in my part of the county." Now, partly from knowing the effects of the agent mentioned, and partly from a previous conversation I had held with my friend, Mr. Relph, I was induced to take along with me a portion of the extract, and, if I found the part in the state he described, to try its effects.

When I arrived, I made an examination *per vaginam*, and found the case nearly as described; but could not for a moment imagine it to be (as he called it) "a horning up;" yet the os uteri appeared to be rigidly closed, not even admitting of so much as a finger with ease. Still, it had not that gristly feel which authors have described. As the cow appeared to have regular parturient pains, and in other respects was well prepared, I thought it a favourable case for the application of the extract of belladonna; and this I did by taking up a little between my two first fingers, and then, introducing my hand, I applied it as well as circumstances would admit of to the mouth of the uterus, or, technically speaking, to the *utero vaginal orifice*.

In the course of a few minutes the cow shewed symptoms of irritation, lashing her tail, stamping with her hind feet; and this went on to general restlessness, which I made no doubt arose from the application of the drug to parts so irritable. This caused me some uneasiness; but I strove as well as I could to suppress it. In time, however, these effects gradually wore off, and I again examined the part, in which I found little alteration, except perhaps more heat than ordinarily. So I ventured to apply a little more of the extract; from which the same results followed, but more quickly subsided. At the end of about three quarters of an hour I made another examination (this is as near the time as I can recollect, the case happening in the year 1843), and, greatly to my satisfaction, I found the os uteri had become so soft and dilatable, that, without much resistance, I could introduce my whole hand, and by a little manipulation obtain room enough to proceed towards the foetus, which I soon reached, and found making a breech presentation. As the parts now offered little or no resistance, she was speedily relieved from her burden, greatly to the satisfaction both of the owner and of those who witnessed the proceedings.

I administered a little anodyne medicine, as is usual after manual

extraction. After this, the cow needed no more than ordinary attendance.

The second case was a similar one, so far as regards symptoms, &c.; but the owner happened to be a man of a more irritable temperament, and not easily convinced from witnessing the effects of the undiluted extract. I thought I would guard myself in this case by preparing a portion mixed with hog's lard, and applying it in the same way; but its effects were not so marked. In half an hour from the first, it was applied again, and from being called upon rather hastily to attend another patient not far distant, I did not see the effect produced this time, but understood it was not very marked. I quitted the house, saying, I would be back as soon as possible; but having occasion to return by home, the owner came to let me know that some of his neighbours (wiseacres, I suppose) and himself had come to the conclusion that nothing but an operation would be of any service. Well! I repaired along with him to the place of *execution*, and made another examination, when I found the part had given way, and was in every respect in a fair way to do well. So I applied a little more of my *favourite*, telling him how the case stood, and that I did not in the least doubt but that in a short time we should be able to accomplish our end. I again left for home, desiring, if the cow got very uneasy before I returned, he was to let me know.

Now, sir, for the grand sum up. Ere long he came to let me know that the cow had calved, and without assistance: a fine lively calf was brought forth, and, for aught he saw to the contrary, both were likely to do well.

So much in the praise of belladonna.

But mark! if any of the numerous readers of THE VETERINARIAN, who have not been made acquainted with the action of such a potent agent desire to try the experiment, I must go so far as to caution them to be sparing in their application of so active an ingredient to parts so important and highly irritable: if not, perchance it may cause a blush to appear, which may in part overshadow the luminary that wishes to shine forth.

P.S. Any comments on the subject I think will be superfluous: I leave it in the hands of the profession to decide on its merits.

CROSS BREEDING.

A COMMUNICATION OF A SINGULAR FACT IN NATURAL HISTORY,
BY THE RIGHT HONOURABLE THE EARL OF MORTON, F.R.S.,
IN A LETTER ADDRESSED TO THE PRESIDENT.*

[Read November 30th, 1830.]

My dear Sir,—I YESTERDAY had an opportunity of observing a singular fact in natural history, which you may, perhaps, deem not unworthy of being communicated to the Royal Society.

Some years ago, I was desirous of trying the experiment of domesticating the quagga, and endeavoured to procure some animals of that species. I obtained a male, but being disappointed of a female, I tried to breed from the male quagga and a young chestnut mare, seven-eighths Arabian blood, and which had never been bred from; the result was, the production of a female hybrid, now five years old, and bearing, both in her form and colour, very decided indications of her mixed origin. I subsequently parted with the seven-eighths Arabian mare to Sir Gore Ouseley, who has bred from her by a fine black Arabian horse. I yesterday examined the produce, namely, a two-year-old filly, and a year-old colt: they have the character of the Arabian breed as decidedly as can be expected where fifteen-sixteenths of the blood are Arabian, and they are fine specimens of that breed; but, both in their colour and in the hair of their manes, they have a striking resemblance to the quagga. Their colour is bay, marked more or less like a quagga, in a darker tint; both are distinguished by the dark line along the ridge of the back, the dark stripes across the forehead, and the dark bars across the back parts of their legs. The stripes across the forehead of the colt are confined to the withers, and to the part of the neck next to them; those on the filly cover nearly the whole of the neck and back, as far as the flanks. The colour of her coat on the neck, adjoining to the mane, is pale, and approaching to dun, rendering the stripes there more conspicuous than those on the colt. The same pale tint appears in a less degree on the rump, and in this circumstance of the dun tint, also, she resembles the quagga.

The colt and filly were taken up from grass for my inspection; and owing to the present state of their coats I could not ascertain whether they bear any indications of the spots on the rump, the

* This "Communication," extracted from the "Transactions" of the Royal Society, is the record referred to by Mr. Goodwin, in his paper "On the Horses of England," in our last number.

dark pasterns, or the narrow stripes on the forehead, with which the quagga is marked. They have no appearance of the dark hair along the belly, or of the white tufts on the sides of the manes. Both the manes are black, and that of the filly is short and stiff, and stands upright; and Sir Gore Ouseley's stud-groom alleged, that it never was otherwise. That of the colt is long, but so stiff as to arch upwards and to hang clear of the sides of the neck, in which circumstance it resembles that of the hybrid. This is the more remarkable, as the manes of the Arabian breed hang lank and closer to the neck than of most others. The bars across the legs, both of the hybrid and of the colt and filly, are more strongly defined and darker than those on the legs of the quagga, which are very slightly marked; and though the hybrid has several quagga marks which the colt and filly have not, yet the most striking, namely, the stripes on the forehead, are fewer and less apparent than those on the colt and filly. These circumstances may appear singular; but I think you will agree with me, that they are trifling compared with the extraordinary fact of so many striking features which do not belong to the dam being communicated in two successive instances; communicated through her to the progeny not only of another sire, who also has them not, but of a sire belonging, probably, to another species—for such we have strong reason for supposing the quagga to be.

I am, my dear sir,
Your faithful humble servant,

MORTON.

Dr. W. H. Wollaston.

P.S. I have requested Sir Gore Ouseley to send me some specimens of hair from the manes of the sire, dam, colt, and filly; and I shall write to Scotland for specimens from those of the quagga and of the hybrid.

I am not apt to build hypotheses in a hurry, and have no predilection either for or against the old doctrine of impressions produced by the imagination; but I can hardly suppose that the imagination could pass by the white tufts on the quagga's mane and attach itself to the coarseness of its hair.

Wimpole Street, August 12th, 1830.

Note by DR. WOLLASTON.

By the kindness of Sir Gore Ouseley, I had an opportunity of seeing the mare, the Arabian horse, the filly, and the colt, and of witnessing how correctly they agreed with the description given of them by Lord Morton.

Having, shortly afterwards, described the circumstances to my

friend, Mr. Giles, I found that he had observed some facts of nearly equal interest, of which, at my request, he has since sent me the following account:—

Particulars of a fact nearly similar to that related by Lord Morton, communicated to the President in a Letter from Daniel Giles, Esq.

[Read November 23d, 1830.]

IN answer to your inquiries, I will now give the best account I can of my sow and her produce.

She was one of a well-known black and white breed of Mr. Western's, the Member for Essex. About ten years ago I put her to a boar of the wild breed, of a deep chestnut colour, which I had just received from Hatfield House, and which was soon afterwards drowned by accident. The pigs produced, which were her first litter, partook, in appearance, of both boar and sow; but in some the chestnut colour of the boar strongly prevailed.

The sow was afterwards put to a boar of Mr. Western's breed, the wild boar having been long dead: the produce was, a litter of pigs, some of which we observed, with much surprise, to be stained and clearly marked with the chestnut colour which had prevailed in the former litter..

This sow had afterwards another litter of pigs, by a boar of Mr. Western's breed; and I think, and so does my bailiff, that some of these were also marked with the chestnut colour; but though we noticed the occurrence with surprise, it is so long since, that our recollection is much less perfect than I wish it to be.

I should observe, that I have known Mr. Western's breed many years, but never, in any other instance, observed the least appearance of the chestnut colour.

Believe me, &c.,

DANIEL GILES.

Youngsbury, November 10th, 1830.

MEASUREMENT OF PROPORTIONS IN THE HORSE.

By EQUESTRIS.

To the Editor of "The Veterinarian."

Sir,—I MERELY send you the accompanying imperfect sketch, in hopes that more correct relative measurements may be rendered, as every point connected with development is of value. They

were taken many years ago, and by accident, a short time since, the statement again came under my notice, after having been thrown aside and forgotten. The subject was a filly foal, half an hour old, very symmetrical, and grew up the same, not a pony, but a horse in miniature: the sire and dam were both ponies. The lengths were taken with great care.

THE FORE LEG.		THE HIND LEG.	
	Inches.		Inches.
From point of elbow to coronet near the heel	20	From stifle to middle of coronet, in a straight line . .	$22\frac{3}{4}$
From coronet to middle of pastern joint	$3\frac{1}{4}$	From coronet to point of hock .	$13\frac{7}{8}$
From coronet to middle of knee joint	$9\frac{1}{8}$	From point of hock to point of stifle	$11\frac{1}{4}$
From point of elbow to top of withers -		11 inches.	

All these distances were measured in straight lines: they are very imperfect, but they are the only recorded ones of the kind that I have met with.

I am, sir,

Your obedient servant.

PLEURO-PNEUMONIA—ITS IMPROPER APPLICATION TO THE PREVAILING EPIDEMIC.

By THOMAS MAYER, *sen.*, *M.R.C.V.S.*

A SHORT time ago I observed some very pertinent remarks of Mr. Mayhew's, relative to the misapplication of the term pleuro-pneumonia to the prevailing and very fatal epidemic which has for some time pervaded the united kingdom, and set at complete defiance all our remedial measures, which cannot be wondered at when we consider how effectually and extensively its ravages alter and modify the original structure of the lungs, a viscus of the first importance and essentiality to life itself.

The disease termed pleuro-pneumonia is one which has long been recognised as a common affection of the lungs and the pleura enveloping them, and also the thoracic cavity, both amongst horses and cattle, and which, by the adoption of vigorous measures, is under our controul and management,—*not so the prevailing epidemic.*

Pleuro-pneumonia is not an infectious disease; but when we daily observe that the introduction of a single diseased animal labouring under this fatal epidemic invariably extends its character and ravages amongst the whole of a large dairy stock, seldom

sparing one (and which if it does is the exception to the general rule), we cannot but arrive at the conclusion that it possesses a highly infectious character.

It is a disease also which, unless you catch it when there is simply a hoose and prior to the secondary symptoms setting in, that ill bears any large depletory measures. By the period, *in general*, when a veterinary surgeon is called in, the enemy has got full possession of the citadel, and pretty well demolished the interior works, so that when our artillery is brought into play he laughs us to scorn, and has only left us an external shell to knock about his ears. Nor need we wonder at its setting at defiance all remedial measures, however skilfully applied, and rapidly assuming an *asthenic* and fatal character, when we consider how very imperfectly the blood undergoes that important change so essential to life, by its free and full exposure to the action of the atmosphere, and its consequent *decarbonization*.

I therefore would, with all due deference to the profession, term it *typhoid-pneumonia*, as one which conveys more accurately its essential characters than the one in present use; and thereby add to our nosology a novel disease, which hitherto has not been recognized in this country: at any rate, it will be a more appropriate term than the one in general use, and serve until some of my professional brethren have found a better.

Newcastle-under-Line, Staffordshire,
Feb. 16, 1847.

P.S. In the paper you kindly inserted of mine in the January Number this year, I observe an error committed by you, having inserted at page 6, line 29, that the inflammation was of a *chronic* character: it should have been of a *sthenic* or *acute* character.

ON THE VAPOUR OF ÆTHER.

EFFECTS OF ÆTHER ON A KITTEN—ON HIS OWN PERSON—REMARKS ON SUCH EXPERIMENTS FOLLOWED UP BY WANTON CRUELTY—RUMOURS OF STRANGE PROCEEDINGS AT THE ROYAL VETERINARY COLLEGE.

By EDWARD MAYHEW, *M.R.C.V.S., London.*

To the Editor of "The Veterinarian."

Sir,—SHALL I be intruding on your space if I again refer to the subject mentioned in my last communication? I have since tried the æther on another animal. A small kitten was the subject

of the experiment. It was soon affected; foamed at the mouth; expelled the urine and feces, and made violent efforts to escape; crying out as loudly as it could during the administration of the vapour. The effect was certainly marked, even more so than was altogether pleasant. The little animal lay for six minutes and forty seconds to every appearance dead: it recovered slowly, and with spasmodic efforts. Long after the breathing had commenced I could not count the heart; nor, for some time, was any sign of recognition evinced. The poor thing screamed out as it was recovering from the deadening influence, and shewed all those symptoms of pain, which, at least, are distressing to witness; and cannot, in animals, be proved to be disconnected with sensibility, though it is doubtful whether they are indicative of suffering. On the following day the kitten was far from well: it was constantly coughing; breathed with some difficulty; and sat apart, refusing food. I gave it no medicine, but watched those consequences which evidently arose from the inhalation. The lungs were affected. Auscultation rendered the fact certain, and there was no symptom displayed that did not give the same indication. A week passed before the animal was in any way recovered; but, at the present moment, it has not perfectly regained its former spirit. This case is of worth, as it proves that the vapour acting on the bronchial membrane may start up inflammation; indeed it is, in my belief, an irritant to every mucous surface, save that of the mouth.

The end of my endeavours to apply the effects of æther to our dumb fellow-creatures, I acknowledge, was not pleasant to me. A marked result, that would allow of exultation and not admit of doubt, had certainly been more agreeable to my taste. Still truth, in any form, is always gain, and I had obtained experience which success could never have afforded; but I could not bring myself to carry my experiments on animals further. I waited to learn more about the vapour, but, as I do not think any knowledge worth another's torture, so I resolved myself to be the next subject of experiment. Perhaps, by giving my own person up to science, I wished to make some atonement to the poor beasts I had unintentionally caused to suffer. If we were all served alike, then none of us could grumble; or, if I was served the worst, perhaps I could plead excuse better for the motives which had actuated me.

I resolved to have a *dens sapientia*, extracted, in order to test the effects, thinking it a fit offering for the occasion. Accordingly I waited upon F. Normansell, Esq., the well-known surgeon-dentist, living at 1, Gloucester-street, Portman-square, and requested his assistance. I indicated the tooth I wished removed; but the gentleman would not proceed without examination, which having made, he declared there was no disease present, and he would not

put any instrument into my mouth. I was forced to be very explanatory. He laughed, and appeared very firm at first, mingling the expressions of his determination with much good advice upon the importance and value of the masticatory organs, of which he told me I did not retain too many. By degrees, however, he softened a little, and what was at first a flat denial became, at last, a gentle expostulation. I knew then he would consent. In fact, being a medical man, he could not resist the temptation I placed before him. With seeming reluctance, assuring me he yielded only to my evident resolution, and to prevent my being tortured or abused by ignorant persons, he appointed nine o'clock on the following morning for my gratification.

The gentleman to whom I have alluded had experience in the application of the æther, and had been most successful in its use. In his hands it seldom failed; and on that account, quite as much as because of his professional skill, I troubled him with my request.

On the following morning, having eaten a light breakfast, I went to my appointment, and found Mr. Normansell expecting me. All was ready. The inhaler he uses was charged with an ounce of æther, six drachms of which were sulphuric, the remaining two chloric. I seated myself, and Mr. Normansell applied the mouth-piece to my lips, while his assistant held my nose. Obeying the instructions given me, I began to inspire lustily; but at first I tasted little, because the vapour was admitted gradually, and, when the air was fully charged, I was not unpleasantly conscious of the fumes which I was inhaling. An agreeable warmth at the chest was unaccompanied by any desire to cough. I did not seem to draw above twenty inspirations before I became aware that the æther was affecting me. The head became swimming, and it soon needed an effort to recognise surrounding objects. The effort made, however, I was incapable of repeating it: a glare passed before my eyes, and I recollect no more.

When consciousness returned, something was passing in my mind, but as to the precise image presented there I have no distinct idea. I found myself leaning over a basin, and washing out my mouth, feeling strangely confused, and earnestly expostulating to Mr. Normansell. It seems I wanted more æther, and was somewhat indignant that the operation had been interrupted: I was soon, however, sufficiently myself to hear, "No, no, no; I will give you no more æther: you'll be through my windows. It is not safe with you."

Consciousness returned suddenly. I recognised where I was in an instant. There was no gradual restoration in that respect. The mind leaps, as it were, from the intoxicating influence, and seizes on the actual at once. Then I became aware of an acrid

impression of a very pungent and disagreeable nature in the fauces, and, moving my tongue, I discovered that an attempt had been made to extract the tooth. My desire for a repetition of the experiment remained; and I certainly, though conscious, had not full possession of my reason. At the time I was not aware of the fact, and should assuredly have asserted the contrary; but the difficulty I have subsequently had in recalling the incidents convinces me of the circumstance. I begged Mr. Normansell to recommence the trial, but he absolutely refused. He informed me, that while under the influence of the æther I had become violent; that it speedily operated; and when I appeared insensible, he had applied the lever to remove the tooth. The instrument, however, he had no sooner began to employ than I rose from the chair, when the mouth-piece, which had been removed, was a second time applied. I once more inhaled, and again was quieted, and to all appearance rendered fit for the operation. The attempt was now made; but before it could be effectual, I got from the chair, seemed to be strongly excited, and appeared to be about to jump through the window. Means were used to restrain me, and I was forced into the seat, when I began to vomit. All this took place while I was unconscious. I am told that the æther was applied the second time, in consequence of my request; but I remember nothing. I retain a confused idea that some image was present to my mind, but have no ability now of stating of what that image consisted. I heard of what had passed as of a circumstance relating to another person, and not connected with myself. Still I was desirous to have the experiment persevered in; and the history I received increased my desire, for the effect on me appeared to be somewhat extraordinary. Mr. Normansell's caution, however, would not permit him to comply with my wish; and as the tooth had, by the force employed, been rendered sensitive, I sat down to have it extracted. Three attempts were now made; but the tooth could not be forced from the jaw, notwithstanding all the power and skill employed. There is, evidently, some peculiarity in the fangs, which opposes the extraction. The repeated trials gave me considerable pain. I felt that keenly enough; but nevertheless do not think but the æther, to some degree, rendered me insensible. I suffered much, but am of opinion that I was not fully alive to every pang. I certainly cared little what was done, and it was only when the agony became acute that I took notice of it. The three effects, however, seemed to exhaust my endurance, and Mr. Normansell kindly, in consequence of my renewed solicitations, consented to try the æther once more, on the following day.

Feeling now very poorly, rather than decidedly ill, I resolved to walk home, thinking the air would revive me; but when I got

into the street, I became so feeble, that I was glad to find a cab. When I reached my house I was an object of pity, and evidently looked ill: I felt depressed, weak, and chilly. I went to bed, and was seized with shivering. I slept for an hour, and awoke up refreshed. A slight lassitude remained, but there was no marked disinclination for food. My pulse, which was ninety during the early part of the morning, when I returned home was only sixty-three, and at night did not reach more than seventy-six.

The next day the odour of æther could still be detected in my breath; and, having breakfasted at eight, I waited on Mr. Normansell at one o'clock. Mr. Rivers was present, and carefully observed me, to ascertain that there was no danger in the experiment. My pulse was ninety-four, full, but no more so than is usual with me. An India rubber ending to the inhaling tube was tried upon me; the object of this was to allow the patient to breathe the vapour through the nostrils, and thereby get rid of the necessity of an assistant holding the nose. The impression of the æther, however, upon the Schneiderian membrane is particularly unpleasant, though not positively painful; it made me use my hands, and arrange the instrument, so as to close the nasal orifices. There was no difference in the result produced. Intoxication ensued as speedily as it had done on the previous day, but the inhalation was continued for a longer period, under the sanction of Mr. Rivers, who superintended the process.

I awoke up suddenly. A most distinct impression was now before me. I saw persons, and knew what they were doing; those persons, however, I must add, were not the individuals present. The images were created by my imagination; these, however, were vivid, and a whole history was connected with them. The experiment of which I was the subject had been needlessly interfered with: I felt angry, and eager to protest against such annoyance. I began to explain, calling out to have the business recommenced; but as I continued to speak, the vision faded, and I cannot now recal it: I know only that it was clear and defined as any reality could be, but that it was soon lost, and now cannot be revived.

The taste of the æther was not so strong as before, and I only felt uneasy and slightly sick. I had not vomited, but, after regaining my consciousness, I soon did so, and then I learned what had taken place during the time I had been insensible.

I had been completely narcotized; but on being touched, before the instrument could be applied, I got out of the operating chair, and extended my arms in a threatening manner. A gentleman pulled me back into the seat, and used force to hold me there. I resisted, and, placing my feet against the foot-board, tore it from

its fastenings. My power to do this afterwards astonished me. I could not, under ordinary circumstances, have put forth sufficient strength to have torn asunder two iron brackets, each three quarters of an inch wide, and three eighths of an inch thick: these, however, I had fairly wrenched apart. I would have persisted, and have again inhaled the vapour; but Mr. Normansell was convinced of the inutility of further trials, and in that opinion Mr. Rivers coincided. My recovery was less uneasy than it had been on the prior occasion. The shivering did not appear, and a little wine and water seemed to do me good. At the expiration of an hour I was able to walk home; but I had, at four o'clock, no appetite for dinner, and during the evening I was low and dull.

So far I have endeavoured to record my sensations as connected with the inhalation of the æthereal vapour. To me that agent, at first a narcotic, appears on the slightest excitement to prove a violent stimulant, a touch in the latter instance being sufficient to alter its action. The stomach on both occasions rejected its contents, and the pulse, after vomition had occurred, sank in a marked degree. The system appeared to suffer, and it required many hours to regain its tone. The effects resemble intoxication by alcohol, but the two are certainly not the same. The action is more speedy, and, when æther is employed, I imagine the brain is not directly acted upon. The dreaming which takes place shews the cerebrum does not lose its activity, whereas, during the stupor induced by alcohol, the drunkard does not dream. The strength of the vision which occurs during the quiescence induced, would indicate that the brain was rather excited than oppressed. During the inhalation, and previous to the loss of power, the senses did not appear to me affected. I was rational till consciousness left me: my ideas were not distorted, nor my impressions falsified. I knew and saw, even during the swimming sensation which immediately precedes insensibility. The heart is not influenced, for the pulse, during and after the inhalation, may remain unaltered with regard to number: it fell after vomition had taken place, but the sympathy consequent on an effect is not to be mistaken for the effect itself. The force of the heart is, however, reduced, and, if the vapour be largely administered, the organ will cease to beat. Motion is not necessarily destroyed, for many have had it excited, and have kept their hands in constant play during the state of unconsciousness. Motion, moreover, is the last lost and the first regained, though some time elapses before it is perfectly restored to the control of volition. Then, how does the vapour act? May I suggest that its operation is confined to the ganglionic system, and that the most obvious effects are consequent upon sympathy? Dogs void the urine and feces prior

to insensibility, or, in some cases, subsequent to it: I and many others vomited on recovering from the stupor. The specific influence of æther is also exemplified in its often magical effects on colic; but it is important to think that an agent which acts as a narcotic to the sympathetic, proves likewise stimulant to the cerebral system. A thought of such opposite influences may help to discover the laws that should regulate the application of the agent which induces them, and, if my suggestion be correct, it may lead us to find out means to counteract the action in that direction which is not desirable. Æther surely might be combined with other medicinals. Its efficacy, as an ordinary drug, is increased when it is conjoined with opium. The fumes of the two could be simultaneously administered, and, perhaps, under some such combination, the benefits of a discovery be enlarged by rendering every description of temperament subject to its influence. The matter certainly demands investigation, for the application of æther to destroy pain should be regarded as the announcement of a principle, not the declaration of a fact. A problem is given which it is the duty of science to work out, not a wonder created for professors to amuse the curious with.

Deeply now do I regret that there is not a proper veterinary college established in this country; severely, I fear, the want of such an institution will be felt by the public. Were there such a place in existence, there the inquiry ought to be conducted. Lawful experiments, seeking the alleviation of misery, might then be largely made upon animals—not cruelties, but efforts designed to lessen pain. Now, because no college of veterinary science exists, the trial will be made upon the poor, and human life be rendered the medium of eliciting the knowledge which animal existence is fitted to afford. The slowness of the process also renders it objectionable: the human practitioner is beset with fears which make him tediously cautious. Ages may elapse before the information which, under better circumstances, a month might confirm, will be gained. A veterinary college, connected as it ought to be with medical science, is at the present time seriously wanted, and I hope the day is not far distant when we shall see some such institution founded.

That the discovery of the power of æthereal vapour is a blessing to mankind, no man in his senses could deny; it takes us by surprise, and renders language unequal to the expression of the gratitude it calls forth. Before this discovery all others to me appear but small: I wonder and admire, but I would not therefore think all had been accomplished and nothing remained to do. Mighty deeds should be the excitants to activity, and what America has produced England should strive to perfect.

Æther now seems to be a plaything with the scientific: successful cases are reported, as though there were no others to announce. We hear only of what has succeeded, and this so often, that it seems the evidence of a fact is thought worthy of constant reiteration. If belief is so hard to gain, then the present habit is necessary; but in it I perceive a danger. By these successful cases the public are taught to infer that failure is impossible, and the profession led to believe that after-results are of no consequence. We do not need any more of such reports. We know that æther does produce insensibility; but, unhappily, that is almost all we know about it, and, while the present mania continues, is all we are likely to learn. One fact is surely proved by as large a testimony as could be desired; then pass from what is established, and seek knowledge in another line. We want *unsuccessful* cases;—we now require instances where the æther partially operated or totally failed. We want proof of the danger which attends it, or the evils to which it can give rise. We have seen and recognised the good side of the subject, but have hardly thought that there may be another aspect to the matter.

Most of all I deprecate the use some persons have not scrupled to make of the feeling which the great American discovery has excited. Many persons have not hesitated to convert the circumstance into a means of puffing themselves in the daily papers, and have not shrunk from seeking that kind of notoriety which it was once thought quacks alone were desirous of obtaining. A wretched animal procured from the knacker, and mutilated while under the influence of æther, should not by the Professor of a college have been magnified into the subject of a surgical operation. There is a huge difference between a surgical necessity and a speculative barbarity. The public, by their execration of the habits of the Alfort school, have recognised the distinction. Professor Spooner degraded himself when he needlessly wounded the poor beast he had previously rendered powerless. These things are not required. The world is so full of suffering, science is not needed to increase it. Neither is cruelty necessary for the experiment. The paring of a corn or the dressing of a foot would have told all that the division of a nerve could have exemplified. Then, moreover, a result procured upon an aged, enfeebled, and emaciated animal is of no value. The horse in the knacker's yard is not the creature of the noble's stable. What the lingering life of the one would endure, might cause the spirit of the other to burst its bounds. The act was mean, the pains taken to make it public foolish, and the attempt to pass it off for a surgical operation dishonest.

Among animals, at least so far as I have experience, the vapour

affects the old and the enfeebled least. The lungs are the organs most liable to be injured. The Schneiderian membrane may, especially in the horse, be fatally excited; for if stimulated to suppuration in the frontal sinuses, the animal will scarcely be benefitted by the short immunity from pain gained by inhalation. Let veterinarians therefore be cautious, and keep their eyes open for results. On the score of humanity, the discovery of the effects of æthereal fumes will be of small benefit to animals. The inhalation causes more pain than the operation would without it. Then brutes have no anticipatory dread to deal with; they come to the operation unconscious, and even after castration will immediately commence eating. The fear which precedes, and the mental depression that follows, they are happily exempted from. The agony occasioned by most operations is very slight; those generally performed upon the horse are all but painless when properly executed. The suffering produced by the inhalation would be greater, in my opinion, than that caused by the surgeon. Animals appear to suffer most from the restraint to which they are necessarily subjected; their struggles are more those of resistance than of agony. We should be cautious lest we become cruel under a mistaken endeavour to be kind.

In certain cases I would employ the æther, but by no means in every instance, until there are more decided proofs of its innocence, and until experience has been obtained as to the action of the agent. In the present state of public feeling an accident would most probably be viewed as an error. The report of the French surgeons is full of instruction. On the other side of the channel the inhalation has not been so uniformly successful as it is reported to have been in England. Let me add, that there are rumours abroad of suppressed failures, and of hidden cases in which dangerous consequences are said to have ensued. The depression it caused me to feel would not have been favourable to the issue of a capital operation; and am I so strange a being, that there is not one living likely to be similarly affected? Animals are certainly depressed after the æther has been administered, and veterinary surgeons know that collapse is in their patients as much to be dreaded as it is in man himself.

I remain,

Your obedient servant.

16, Spring-street, Westbourne-terrace.

P.S.—I hear Mr. Charles Spooner has announced to his class that a draft of a new Charter has been “by them” prepared—has been approved of by the Governors, and will be speedily recommended to her Majesty by the Government. Strange news!

wonderful intelligence! I hear also that there is an inquiry concerning the Veterinary College being now made by the Agricultural Society. I trust that the latter report is well founded. More than an inquiry, however, is wanted. The abuse of years demands an investigation. Let the matter be searched into with an uncompromising spirit. Let the proceedings of the teachers, both in the school and out of it, be for the first time inspected. Let the practical ability and theoretical knowledge of the Professors be tested. Haul over the "case book," and find out, by examining various parties, whether there is nothing extenuated in it. Let agriculturists follow Mr. Simonds into the London dairies, and seek opinion as to the knowledge of a cow which the gentleman there displayed. Let them review his lectures, and discover whether the speediest way to kill is not promulgated to boys as the readiest means to cure. Let it be found out what he teaches, and what he does not even mention. Let his general information, his literary acquirements, his anatomical industry, his physiological genius, his pathological talent, his fitness for office, and the means by which he gained his present position, be looked into. When that is done, let Mr. Spooner receive attention according to his merits. Let the conduct of the Professor be turned over, and a similar investigation undertaken. Then pay to Mr. Sewell the compliment of a fair inquiry. The result will repay the trouble. It will be found out that Mr. Spooner was Mr. Sewell's friend: Mr. Simonds was Mr. Spooner's companion, and Mr. Some-one-else Mr. Simonds' protégé. A mystery explaining much will be laid bare; and, after all, the agriculturist will discover, probably, that the doings in the College are not favourable to the security of cattle, or the connexion which exists between the Society and the school calculated to increase the knowledge of their diseases. The results of experience will not be discovered to have checked the progress of epizootics. Mr. Sewell's memorable recommendation concerning the vesicular disease murdered thousands. Mr. Simonds' teaching with regard to pleuro-pneumonia will be perceived to have been based upon desperate necessity and hardihood of speculation. The agriculturist will find that loss has resulted from the propagation of error, and, where confidence was reposed, no pains were taken to discover truth.

Such will turn out to be the melancholy issue; and that it may not be perverted, the well-intentioned assertions of persons being Governors of the St. Pancras Institution should be listened to with caution. The Governors know nothing of the place. Parties have been there in the capacity of teachers who never knew the features of a Governor: what, then, can the Governors know of the management of the Institution over which they are fabled to preside? Before the Governors expose themselves by seeking additional grants, or

founding demands upon the conduct of which they are ignorant, let them, as a duty they owe to their own characters, investigate every circumstance connected with the building. Let the servants who have been discharged, and the officers who have quitted, be sought out, and their evidence taken. The matter has never been sifted, but the madness of individuals urges on inquiry, which can now be no longer delayed. Messrs. Sewell, Spooner, and Simonds, cannot be in a position to address a Government, and the Minister has not yet been born who dare advise the Crown to squander its sacred privileges because the undeserving clamour. We want a Veterinary College—at present we have none. The Charter gave the means of establishing such an Institution ;—the public must be appealed to to raise the structure.

When I was just about to seal my letter, I received a communication from my friend and late pupil, Mr. Shepperson, who is at present in France, and studying at Alfort. An extract may not be devoid of interest, as bearing on the subjects alluded to :—

“Many experiments have been performed upon dogs and horses with sulphuric æther: one dog had the leg broken, and several others had them cut off without flinching. A horse had $\frac{3}{4}$ iv of it injected into the jugular: he fell almost instantly, and became insensible to pain; he so far recovered in about a quarter of an hour, as to be able to raise his head and look around him: he died some hours afterwards. Several people have been operated upon in Paris under the influence of the æther; but in one case a man became furious, and jumped out of the window: from that time they have thought less of it. This horse abovementioned had but just spontaneously recovered from glanders; he was inoculated with virus taken from a veterinary surgeon who died of the affection in Paris. The disease shewed itself with glandular and lymphatic tumefaction; chancres on the parts inoculated, but not upon the nostrils: these symptoms increased for a few days, and then they gradually receded, and the animal recovered. The clinical instructions commence at eight and last until about twelve o'clock; so you can form an idea what practice I see. The Professor has about sixty students to help him, and they are mostly employed. Sometimes there have been six horses cast at once.”

ADDITIONAL OBSERVATIONS ON THE EFFECTS OF THE INHALATION OF ÆTHER ON ANIMALS.

CORRESPONDENT with its operation on the human system has hitherto proved the *effect* of the inhalation of the vapour of sulphuric æther by the brute; and, altogether, this may be pronounced so far satisfactory that, though unlooked-for and undesirable results have in some instances followed, sanguine hopes are entertainable that this stifler of pain and sensation will one day come into common use, both with surgeons and veterinary surgeons. It would seem out of the course of nature that any great good should befall either mankind or brutekind without its attendant evil. When railways first came to be travelled upon, every person going by them conceived they were accomplishing journeys with great rapidity at the risk of their lives; and though this chance of peril is greatly diminished, and still admits of diminution, it has not been, nor ever will be, entirely got rid of. So it is likely to turn out to be with æther. We have had some sinister and even alarming results, but as yet no *fatal* ones—at least we have heard of none. As, however, our trials and experiments become multiplied, we shall gain that knowledge and tact in its application which, no doubt, will very much diminish the risk of the danger of taking æther. Still, from idiosyncrasy and other causes, it is probable there ever will be some remote evil attendant on its exhibition.

In its operation, the æthereal inhalation has shewn a good deal of analogy to intoxication. The suffused and congested countenance, indicative, along with other symptoms, of congested brain, and spinal marrow as well, all favours this notion. At the same time there is something more or something less in the insensibility produced by æther than in that resulting from ordinary causes; something different from what common intoxication produces. The ætherized (human) patient, though insensible to pain, not infrequently is found to retain, to a greater or less degree, his consciousness: in other cases, while the insensibility has only been deadened or diminished, not destroyed, and the patient, feeling no more than some trifling “scratching” sensations, has been all along perfectly conscious of what was doing to him and about him: in the majority of cases—especially in such as have had the inhaling process most efficiently conducted—there has been a total loss both of sensibility and consciousness, the patient being thrown by the ætherization for a time into a perfect lethargy; and this in some instances continuing after the completion of the operation on

account of which the patient has been ætherealized, to the dismay and alarm of the medical attendants. In other cases again, comparatively rare in their occurrence, the æther has had an exhilarating or stimulating effect, something similar to what the nitrous oxyde or "laughing" gas is known to produce. Thus, mostly the narcotic, sometimes the stimulant virtues of æther have prevailed; while in other cases there has been evidently present a sort of mixture or alternation of these two properties of the æther. The writer of this remembers, many years ago, a patient being in St. Thomas' Hospital, in the Borough, who was subject to cataleptic fits to that degree that on one occasion she continued four days, lying upon her bed in the ward, in a trance. This girl—whose name was DURAND—quitted the hospital uncured of her catalepsy, and was, some months afterwards, by accident, met by the writer in the street. And no sooner was the (natural) inquiry made of her, as to her "fits," than she quickly and cheerfully answered, "Oh! I am not at all *hindered* by them now; for no sooner do I happen to fall into one—which is rarely the case—than the people I live with pour æther upon my breast, and this immediately revives me." So that, notwithstanding æther has the power of throwing a person into a lethargy or trance, it clearly, in this instance, had the power, also, of rousing a person out of one.

So far as experiments have yet gone, there is good reason to look forward to ætherization being both available and useful to veterinary surgeons in their practice. The trials made by Mr. Mayhew—related in our number for last month—on dogs and cats, certainly did not afford the most encouraging results; but some experiments of a later date, made on horses and asses, hold out a promise to us which we should be sorry to see invalidated or weakened by any future experiments of the kind.

Mr. BARROW, the well-known and respected veterinary surgeon at Newmarket, has kindly sent us the following as the result of his experiments:—

THE FIRST EXPERIMENT was on a small terrier dog. "After inhaling the ætheric vapour for two minutes, it became perfectly unconscious, powerless, and devoid of all sensibility; and this state of insensibility lasted for four minutes. Seeing it, I amputated the tail, reflecting the skin covering the dock for half an inch, and cutting through the joint; all which was done without the dog evincing the least sensation, lying as he was upon a table, unrestrained. The recovery was gradual, but perfect in the course of ten minutes."

EXPERIMENT II, was on an ass. "The effect of ætherization was produced in four minutes, causing him to fall head foremost, and to be for the space of three minutes motionless and powerless;

during which time I unnerved one fore leg, the limbs all being unrestrained. At the moment of division of the nerve there was a slight twitch of the limb, but no more. And not the least inconvenience resulted from the inhalation."

EXPERIMENT III, was on an older ass. "Ætherization was produced in five minutes, when the animal fell with great violence, and struggled for a few seconds; then became quiet and insensible, and continued so for five minutes. In this state I performed the operation of nicking by two incisions. A medical friend being present, the knife was handed over to him, and he made a deep incision into the muscles upon the outside of the thigh. Both operations were unattended by the least expression of pain, or by movement, in fact, of any kind. In fifteen minutes afterwards the donkey partook freely of bran mash, appearing nowise the worse for what had been done to it. The pulse in each experiment was found but slightly increased. The respiration was retarded."

EXPERIMENT IV.—"A two-year-old thorough bred filly was submitted to the influence of æther, and affected by it in four minutes, when it fell powerless, in an easy manner, down upon the bed spread underneath it. It continued in the comatose state in which it had been thrown by the æther twenty-nine minutes, during which space of time I unnerved both fore legs, without confinement being used, and without, on the part of the animal, the slightest evidence of pain or sensibility, notwithstanding I repeatedly during the time squeezed the nervous cords. The inhaling apparatus being removed, the animal in a few seconds revived, raised her head, and began neighing. In fifteen minutes sensibility was restored, and she then got up by herself, and walked with a cautious step to her manger."

EXPERIMENT V.—"An ass, intended to be castrated, was made to breathe the ætheral fumes, and by them, being in three minutes and a half rendered powerless, gently fell to the ground. A minute afterwards, the animal, perfectly insensible, lying upon its off side, was submitted to the operation of castration. An assistant raising the hind leg, in order to afford me an easier grasp of the testicle, I performed castration in the usual manner, with the caustic clams, doing every thing with as much facility as though I had been operating on a dead subject. The animal was kept under the influence of the æther for fifteen minutes, when the apparatus was removed, and it was fifteen minutes afterwards before sensation returned, there being no untoward result whatever."

Both of the animals last operated upon are doing well. In none of the subjects that have been operated on has there been any hæmorrhage. Mr. Barrow concludes this interesting account of his experiments by remarking, that he "entertains sanguine hopes

of the general application of æthereal inhalation to animals ;” and that “in his experiments and operations he has received essential assistance from his brother, who is in partnership with him.”

The operation of NEUROTOMY, under the influence of æther, has likewise been performed by Mr. Spooner, at the Royal Veterinary College ; as will be seen from the following notice thereof, which we extract from *Bell's Life in London*.

“The horse was labouring under chronic lameness of the near fore foot, from navicular disease, and the operation of *unnerving* was resorted to. In this case the æther vapour was inhaled for about thirteen minutes, when the horse fell forwards, and the nerve on each side of the leg was divided by Mr. Spooner, without the least manifestation of pain : a slight convulsive action of the limb, similar to that which takes place when the nerve of a recently killed animal is cut through, alone giving indication of any sensation. Within twenty-three minutes this animal had also recovered from the effects of the æther. No restraint whatever was resorted to, to keep the animal in the required position for these operations, but an apparatus temporarily adjusted by Mr. Morton until a more perfect one was obtained.”

In like manner has the sheep been treated ; and in like manner has this animal been tranced ; and Mr. Simonds, of the above institution, has accomplished amputation on it during its insensibility ; as will be seen from the following, taken from the same paper.

“The sheep had been for many months affected with an incurable disease of the hock-joint. The pain was so severe that the poor sheep was quite unable to put her foot to the ground without experiencing much suffering. On being brought into the theatre, she was caused to inhale the vapour of æther through a tube, and in about five minutes afterwards it was evident that she was under its influence. The leg was then amputated by Mr. Simonds at the thigh, without the slightest indication of any pain whatever. The operation occupied about six minutes, and within twenty minutes of the commencement the animal was removed from the theatre restored to sensation and consciousness.”

From the same source—*Bell's Life in London*—we learn that Mr. Edwin Taylor, veterinary surgeon, of Bury, has performed *neurotomy* and also *firing* on an ass ætherealised.

“On Saturday, the 30th ult., about half-past two o'clock, the animal commenced inhaling the fumes of æther through one nostril, the other being completely closed by an assistant. In about four minutes he became obviously affected, and dropped upon his hind quarters, and then upon his side. The operation of *neurotomy* was then commenced ; an incision was made through the integument at the fetlock-joint, and the metacarpal nerve cut down upon and di-

vided, and nearly an inch excised, without the animal betraying the slightest symptom of pain. Had he been operated upon in the usual way, he, no doubt, would have felt great agony, and offered great resistance, for in no operation have operators so much resistance to contend with, in consequence of the pain, as when the nerve is divided, as in this operation. The actual cautery was now applied to the other leg, as in the operation of firing, and its effect seemed to occasion not the slightest torture. The animal, for neither operation, was in any way confined, except his head held, but lay almost motionless on the ground. As he became reanimated, he turned his head up and appeared quite unconscious, or rather as if he had been asleep. His pulse, during the operation, slightly increased, but afterwards rapidly rose to 94 in the minute. The operations were considered quite conclusive, and perfectly satisfactory to the medical gentlemen present.

So far as horses, however, are concerned, it would appear from the annexed short paragraph taken from the *John Bull*, that ætherization is likely to serve other purposes than that of preparing horses for bearing pain.

“ On Thursday, æther vapour was applied to a vicious horse, the property of Mr. G. Hughes, of Godstone, whilst it was shod, an operation which it had been found impossible to perform otherwise.”

In India, where the horses from being all uncastrated are proverbially vicious and restive, and unquiet to be shod, or to have any thing done to them, a sort of grass called “ bang,” the natives gather, is given to the horses, who greedily eat it, and from its narcotic effects speedily become intoxicated, and in that state, which lasts about an hour or so, turn so tame, and indifferent as to what liberties are taken with them, that shoeing and all other operations are thereby rendered comparatively safe and facile of performance. In the instance above cited, a full dose of the æthereal vapour was administered. In future experiments it might be as well to ascertain what effect half doses,—doses that produce only a sort of stupefaction, not complete torpidness,—would have in such cases.

In concluding this running account of transactions we hear and read of on the subject of ætherization, we can only give it as our opinion, that we seem as yet to have a good deal to learn about its operation and administration. Certainly, it bids fair to prove an inestimable jewel, as a charm against pain, to us human beings, and, so far as it has yet been tried, has turned out equally prophylactic of suffering to the brute. Still, failures and unlooked-for results have presented themselves, against which it must be our study to guard in all future experiments.

Extracts from Domestic & Foreign Journals, Veterinary, Medical, Agricultural, Sporting, &c.

COMPTE RENDU OF THE PROCEEDINGS OF THE ROYAL VETERINARY SCHOOL AT ALFORT DURING THE SCHOLASTIC YEAR, 1844-45.

[Continued from vol. xix, page 583.]

Pneumonia.—Treatment—Therapeutic Action of Emetic Tartar.

12. TREATMENT.—The most certain and efficient way of treating pneumonia is by bleeding; and this operation should be practised whatever may be the breed, age, temperament, or actual state of the patient—the degree of intensity which the disease has attained—the period at which it is observed—or the form which it takes on. In a word, under whatever circumstances pneumonia may develop itself in the horse, the first and most invariable course indicated is to bleed to an extent commensurate with the circumstances under which the disease manifests itself.

13. This chief indication, predominating over all other treatment in pneumonia, is owing to the excessive vascularity of the pulmonary organs, they so readily becoming disorganized when gorged with blood, or infiltrated with the serous fluids emanating from it. Besides, the evacuation of the circulatory system generally is the best way of re-establishing the pulmonary circulation: physiology assumes this fact, and practice demonstrates it.

14. It is particularly at the onset of pneumonia that bleeding is found most efficacious and prompt in its action. The progress of the most acute attack may be checked by the abstraction of from 15 to 20, 25, or even 30 measures of blood within a few hours after the disease has manifested itself.

15. The quantity of blood it may be advisable to abstract at certain successive epochs of the disease is indicated by the state of the pulse, the injection of the mucous membranes, the bodily strength, and the general state of the patient: in a word, it is defined and ascertained by such various kinds of examination as the practitioner has at his command; but whatever may be the contra-indication apparently resulting from an observation of these signs, bleeding, even to a large extent, ought always to be practised when the disease is in its commencement. The weakness which follows pulmonary congestion is often only fictitious. The animal powers

become re-animated as soon as the pulmonary circulation becomes re-established.

16. External revulsives constitute powerful assistants in the treatment of every stage of pneumonia. In the commencement, mustard poultices recommend themselves, especially by the promptness and intensity of their action, which is proportionate to the rapidity of the progress and to the intensity of the disease, and therefore counterbalances its effects. The best place to apply the poultice is upon the sub-thoracic region and the inner surface of the fore limbs.

17. SETONS, which are slower in their effects, and more circumscribed in their sphere of action, are especially suitable after the disease is established, their efficacy arising less from the sanguineous revulsion they determine than from the secretion induced by them. By depriving the blood of a considerable portion of its active principles they beneficially counteract the plastic phenomena, and the anormal secretions likely to arise therefrom within the pulmonary tissue.

The best place for the application of a seton is the costal region, parallel with the direction of the sides.

18. The application of setons to the sides is occasionally followed by hot and painful swellings, which take on a gangrenous character and cause death. This complication, so much to be feared, is frequently induced by the state of body of the patient. Where the constitution is seriously exhausted and weakened anteriorly to the development of the disease,—or even where the pernicious influence of this latter has too long exercised an oppressive action upon the vital powers, and too long opposed their sanatory re-action,—the tissues, irritated by the tape of the seton, may not undergo the requisite inflammatory modifications to protect them from contact with external bodies. Putrefaction in consequence takes place; gangrene follows, rapid in its progress and fearful in its effects; consecutive of which is the almost certainty of the system becoming affected by the septic matter, and then death ensues.

19. Howbeit, the causation of gangrene is not always so fatal. In many cases it may be attributed to some part of the performance of the operation itself. Thus, it not unfrequently happens that the gangrene consecutive on the application of a seton to the side arises from a laceration of the intercostal muscles by the point of the instrument, or is caused by the needle having taken a wrong course through the cellular tissue or the subcutaneous muscles. In these cases the animal matters, viz., the blood, the serosity, and the ill-conditioned pus, may become collected in bags or cavities, undergo alteration from contact with the air, and

become the source of local gangrene, and of a more or less serious general putrid infection, according as one of the conditions essential to the re-action of the organization,—the integrity of the hematosis,—is impaired or destroyed by the invasion of pneumonia.

20. A moderate degree of warm and painful swelling about the seton, attended with rapid formation of pus, is one of the favourable signs in the prognostics of pneumonia: it shews that a revulsive and effective action, confined within proper limits, has been produced.

On the other hand, the absence of pain and heat, and the non-existence of purulent secretion along the course of or at the orifices of the seton, are ever to be regarded as unfavourable symptoms; in fact, they announce weakness, oppression, and a failure of the organizing re-acting principle.

The truth of this proposition is exhibited by the evident testimony of daily clinical facts. Frequently, at the commencement of pneumonia, when the disease is at its highest, external revulsives appear destitute of all sensible effects; but when, through the combined use of other remedies, the intensity of the disease is somewhat surmounted, re-establishment of the equilibrium of the bodily powers becomes manifest by the intensity of the revulsive action, which occasionally becomes too energetic*.

21. The internal medicaments which have principally been employed this year, in conjunction with bleeding, in the treatment of pneumonia, are, sulphate of soda, and, still oftener, tartarised antimony.

22. The last named drug, applied to the economy of the horse, has displayed invariable therapeutic power, with so great a degree of efficacy that in all the various cases in which it was used it has always been easy to attribute the cure of the patient to its influence.

In other words, does an observation of the experiments made

* I recollect a circumstance, illustrative of this point, where this phenomenon was peculiarly evident. Some years ago a horse was brought, in a conveyance, to the hospital of the school, which was affected with complete paraplegia. This animal had already been treated by a veterinary surgeon, who had applied a seton stimulated with antimony ointment to each buttock. For the first three days of the treatment no sensible amelioration appeared to take place in the state of the patient, nor did any symptom of re-action manifest itself at the parts to which the revulsives were applied: on the fourth day the animal made an effort to rise, and succeeded in supporting himself on his hind quarters: on the fifth day, the setons, which had hitherto been perfectly dry, began to swell, and the inflammatory action was so intense, that the skin, along their whole course, and for a considerable extent of surface, became gangrened. Nevertheless, the horse was dismissed from the hospital, "cured."

with this drug justify us in attributing to it a sufficiently powerful influence to rely upon its arresting the course of pneumonia, if employed alone and without the addition of bleeding?

23. This question still remains to be solved. Notwithstanding the numerous experiments made on the point this year, we do not yet feel capable of returning any definite answer. It is particularly in the appreciation of the effects of a drug when applied to the animal economy that the proverb, *experientia fallax experimentum difficile*, is verified.

The problem to be solved is one of the most complex, and, if not carefully studied, if each of its data are not separately weighed and estimated at its own proper value, we are liable to fall into great delusions, draw false inferences, and arrive at wrong conclusions. Thus, for example, in order to appreciate the influence of tartarised antimony on the treatment of pneumonia in the horse, we must have it in our power to try the effect of this drug, administered by itself, and isolated from all other therapeutic means, on the patient; and, in studying the phenomena consecutive on the administration of the antimonial salt, due allowance must be made for the breed, age, sex, and constitution of the patient; his actual state, which will give some idea of the resistive power of his organization; the data and extent of the disease, the treatment which has already been resorted to, &c., &c.; all of which circumstances impress a special and distinctive character on the diseases observed in different individuals.

Nor ought one single experiment made under any of the conditions above enumerated to be regarded as conclusive: it is only when each has been several times repeated, and when, by an observation of the phenomena under similar circumstances, we have noted a certain consistency in the results; it is then, and only then, that we may be allowed to lay down any definite conclusions based on the facts thus carefully observed. But in by far the greater number of cases it is impossible to pursue a course of therapeutic experiments with this exactitude.

When a patient is placed under your care, a conscientious feeling of duty compels you to have recourse to those modes of treatment the efficacy of which have been demonstrated by experience: it is but as secondarily that you can try the effect of those agents whose therapeutic influence is doubtful; and the action of these secondary means being confounded with the primary treatment, and with the salutary effects of the healing influence of nature, it becomes difficult if not impossible, amid this confusion, to assign to each of the therapeutic agents you have employed its own peculiar share in the result produced.

In pneumonia, for instance, the first indication which presents

itself to the mind of the observer, that which he instinctively obeys, induced as it is by such palpable symptoms, is the necessity of bleeding; and in an immense majority of cases the treatment is commenced by this operation, and continued by the employment of such medicinal agents as are supposed to be peculiarly efficacious in counteracting inflammation of the lungs. In these cases, which are those most commonly met with, the cure, if one be obtained, is produced by a conjunction of influences, amid which it is difficult to recognise the limits of the part played by each individual one.

These reflections become necessary, to account for the hesitation we feel in pronouncing on the specific action of antimony in pneumonia in the horse, notwithstanding many years of study and experiment. We are now about to give a summary of the observations we have made on this medicament.

24. Emetic tartar, when administered internally, completely dissolved in fluid, is a drug which seems to be more tolerated by the animal economy of the horse than any other; in fact, if the dose is moderate, scarcely any effect is manifested, by any appreciable signs, even to the most attentive observer; and the effects which it produces when administered in very large doses are, in general, far from bearing any relation to the powerful influence which this tonic agent is known to exercise over the human economy.

25. This normal unsusceptibility of the economy of the horse to preparations of antimony, and to the one most of all used, viz. emetic tartar, is one of the principal causes of the difficulty which presents itself in endeavouring to appreciate their therapeutic influence. How can we estimate the salutary action of a drug when the symptoms characteristic of its influence upon the organization are scarcely perceptible in a state of health; and in a morbid state, disguised by excessive derangements occasioned by the disease? We shall endeavour to reply to this question by studying the action of tartarised antimony on a healthy and on a diseased animal, separately; and, in order to regard it under all its aspects, we shall successively examine all the modifications the various functions undergo while subject to the influence of the medicine.

THE DIGESTIVE CANAL.

26. Given in a moderate dose, that is to say, from two to eight or ten grammes*, emetic tartar, generally speaking, does not exercise any very sensible or appreciable influence upon the digestive apparatus, at least during the first days of its administration. The animal drinks the water which holds it in solution without manifesting any disgust for the flavour communicated to it by the drug,

* A French gramme is equivalent to 15.438 grains troy.

or, more properly speaking, without appearing conscious of it; and when once imbibed, in by far the greater number of cases, the contact of the medicine with the mucous membrane of the stomach and intestines is attended by no outward symptom.

In some few exceptional cases, however, the administration of tartarised antimony has been followed by slight and transient attacks of colic; it has also, occasionally, induced some intestinal irritation, followed by mucous secretions and diarrhœa. Lastly, in some, but happily rare, cases, the administration of a very small dose of emetic tartar has been known to be followed by the most fatal consequences, and to produce death. This strange result singularly contrasts with the innoxiousness of enormous doses of the medicine, and ought not to be lost sight of, but render us cautious how we use it, even in the smallest doses.

The two following cases will forcibly demonstrate the truth of this assertion:—

Case I.—An entire draught horse, about thirteen years old, small in size, black, marked on the head, belonging to M. B., plasterer, was brought to the school to be treated for a catarrhal affection of the bronchia, which had lasted several weeks.

When first brought into the hospital, its general condition was excellent. A muco-purulent discharge flowed abundantly from one or the other nostril, accompanied by a hoarse quinsy-like cough, tolerably violent; though, with the exception of a slight degree of vascular injection, the nasal membrane was in its natural state. The subglossal lymphatic glands were somewhat puffy and indolent. The other functions were normal. On the 27th of March, the day after the patient was received into the hospital, four grammes of emetic tartar were administered in a drench of white water, which the animal drank off without disgust: regular rations. Throughout the day the horse ate with appetite, and the action of the medicine was imperceptible. According to the report of the pupil on duty, nothing worthy of mention occurred during the night.

On the morning of the 28th, alarming symptoms were suddenly observed. Might they not have arisen in the course of the night? The animal was suffering from violent colic, without throwing himself into convulsions. The belly was much puffed up; the pulse small, and almost imperceptible; the mucous membranes pale, and the nostrils considerably dilated; the respiration plaintive and much accelerated, and the animal subject, almost without intermittence, to violent tenesmus. A bleeding, resorted to under the supposition that all these symptoms might arise from some intestinal congestion, scarcely produced 3 lbs. of blood. Twenty grammes of laudanum were administered internally. Attempts made to re-animate the heat and circulation of the skin by vigorous

manual friction, but no amendment was produced; on the contrary, the state of the animal became every minute more alarming. His noisy and panting respiration—protruding eyes—extreme weakness, which caused him to seek instinctively the support of the wall or stall—his frequent falls, bodily—the pallor of the mucous membranes—the insensibility of the pulse—the coldness of the skin, &c.,—all announced the near approach of death, which took place about ten o'clock.

A POST-MORTEM EXAMINATION was immediately made. The *abdomen* contained a quantity of reddish fluid, in the middle of which the alimentary matters floated; the whole surface of the peritoneum was strongly injected; the stomach and large intestine contained a considerable quantity of food; the mucous membranes, and especially that of the colon, were much congested; on this latter small blackish specks were observable, in patches, which were neither more nor less than eschars, occasioned by contact with some ill-dissolved fragments of the antimony. Towards the middle of the floating portion of the colon was a longitudinal rupture, about an inch and a half in extent, the edges of which were blackened by an ecchymotic filamentous infiltration. A little in front of this rupture, upon the same portion of the intestines, there was another rupture, about a couple of inches in length, of the serous and muscular tunics. The mucous membrane was here intact.

Case II.—A dappled grey cabriolet mare, of moderate size, eight years old, belonging to Dr. G—, Rue St. Anne, Paris.

This animal had been for the last fortnight troubled with an unpleasant discharge from the right nostril, the glands under the jaw on the same side being considerably developed. The work of this mare was very fatiguing, and consisted in drawing a four-wheeled carriage through the streets of Paris nearly the whole day.

State of the animal when brought to the hospital.—In good condition—coat dull, dry, and rough—nasal flux from the right side—a slight discharge of whitish flaky matter adhering to the alæ of the nostril—tumefaction of the sublingual glands, which were hard and flattened, and adherent to the bone;—the right eye was tearful and bleared;—no sign of erosion or ulceration was yet apparent on the pituitary, whose hue was nearly natural.

Diagnostic.—Chronic glanders in its earliest stage.

On visiting the animal on the 16th of November, the day after it was brought to the hospital, the administration of 16 grammes of antimony combined with 30 grammes of opium in an electuary of honey and marshmallow powder was prescribed; and the pupil to whose care this animal was confided was desired to let it fast before the administration of the medicine, and not to give it any food until four hours after. After the lapse of some hours the

mare became dull and uneasy, pawing the ground, and evincing symptoms of slight attacks of colic: the pulse was accelerated—the arteries distended—the respiration unnaturally frequent—the mucous membranes injected—the discharge from the right nostril more abundant. These symptoms continued until the middle of the night, when the colic pains diminished, and the animal was able to take some rest.

On the 17th the animal continued dull, and refused both food and drink: a warm drink of camomile infusion was prescribed. During the day the symptoms of yesterday re-appeared with increased intensity: the animal manifested its suffering from violent intestinal pain by continual stamping; the visible mucous membranes were highly injected and had a yellowish shade; respiration was rapid and whistling, and the nostrils appeared convulsively dilated. To these were united some nervous symptoms: the pupils were excessively dilated; the sight seemed dull; the animal supported itself by resting its forehead against the wall of the stable, and remained immovable in this position, making violent efforts towards regurgitation.

Left to itself outside the stable, it walked forward in a straight line until it encountered any obstacle, against which it ran, and supported itself, turning round continually at the extremity of its halter in the same circle. It refused all food; occasionally snatching a mouthful of hay from the rack, which it retained in its mouth without masticating it, as if it were a horse incapable of motion.

18th, a continuation of the same state. Took 8 lbs. of blood, which dribbled out: some nervous shiverings succeeded, and the fits of colic became more violent than on the preceding day. Opiate drinks were prescribed, which produced a temporary good effect; but two hours afterwards the convulsions of death commenced. The animal died in three hours.

POST-MORTEM EXAMINATION.—Lesions of chronic glanders in the lungs and nasal cavities. Recent ecchymotic patches in the parenchyma of the lungs; very black and very thick ecchymosis beneath the internal membrane of the heart; black and slightly consistent coagula in the right cavities.

Abdominal cavity.—This contained about seven or eight pounds of reddish fluid. In the large curve of the stomach, which contained a considerable quantity of hard food, was a rupture of eight or ten inches long, the edges of which were filamentous and ecchymotic. The surface of the mucous membrane was eschared throughout a considerable extent; and here and there, and especially on the right side, presented large brownish eschars which had begun to separate. The submucous cellular tissue was considerably in-

filtrated with serosity, and beneath the eschars shewed patches of suppuration.

Some portions of the intestinal mucous membrane were slightly injected. The large intestine contained a mass of hard dry matter, but, with the exception of some small vascular arborizations, its mucous membrane continued in its natural state.

Although the facts reported in these two cases are altogether exceptions to the general rule, they are not on that account the less important; for they demonstrate that even in a moderate dose, as the one given in the first instance, or in one which under common circumstances would have been innoxious, as in the second case, tartar emetic is capable of becoming the cause of serious lesions, if certain rules, which ought to be attended to in the administration of it, are not scrupulously observed; such, for example, as only to give it in a state of perfect solution, in a fluid, and when the digestive cavities are in the utmost state of emptiness. In point of fact, the mode and the conditions under which this drug is administered exercise a material influence both upon the amount of the dose in which it may be taken and the local and general effects it is liable to produce. When the emetic is in a perfect state of solution, in a considerable quantity of liquid, it may be administered to the horse in large, and what appear excessive, doses without producing other alteration than a slight superficial and temporary rubefaction of the intestinal mucous membranes, and chiefly of that portion of the membrane which lines the grand reservoir for fluids, the cœcum.

On the other hand, a comparatively small dose of the medicine given in a solid form is capable of producing most serious lesions; from its caustic properties, destroying and scarring those portions of membrane upon which it lies, and not unfrequently wholly perforating the canal in which it rests. Its effects on the stomach and large intestines are particularly to be feared, when the ball containing the emetic, or the fluid which holds it in coarse and imperfect solution, penetrates into these cavities at a time when they are filled with alimentary matter; for, by coming in contact, in following the course of its ingesta into the stomach, with the exterior of the mass then dilating the intestinal reservoirs, this antimonial salt becomes applied immediately to the mucous membrane, and there retained by the contractile action of the organ, in which it is capable of producing disorganization to an indefinite depth and extent, depending on the quantity of the toxicative matter imbibed.

A perfect solution of tartarised antimony given in a large quantity of fluid will not produce these effects, even when the intestines are full, because the liquid passes rapidly through the open spaces

in the canal, and becomes imbibed by, and incorporated with, the alimentary mass contained in the large reservoirs. But, although less dangerous when thus administered, there are good and sufficient reasons why emetic tartar should not be given immediately after a meal; for, leaving out of all question the disorders which it sometimes produces in the digestive functions, the violent contraction of the muscular coat which it is capable of creating, either by direct contact or by absorption, is, in some cases,—not often met with, it is true,—the cause of rupture of the intestinal walls, where the mass upon which they contract is too hard, and opposes an insurmountable degree of resistance.

When tartarised antimony is administered in doses of 60, 80, 100, or 120 grammes, its local action, if it remains medicinal,—for it is capable of becoming and does often become poisonous, especially in the extreme cases which we have pointed out,—its effect in these doses is that of a violent purgative, if we may judge by an abundant diarrhœal fluxion which comes on after a lapse of from twelve to fifteen hours. These results are, however, far from certain, quite the contrary, tartar emetic being one of those drugs on the purgative effects of which no reliance can be placed: indeed, so great is its inconstancy, that sometimes it has to be administered in daily increasing doses, even until the enormous quantity of 200 grammes is reached before purgation can be produced.

It must be understood that such test can only be undertaken experimentally. If the emetic is uniform as a medicine, it is equally so as a poison; and the accidents occasionally produced by moderate doses of it ought to put us upon our guard against it; the more especially when we come to these enormous doses, which, although borne with perfect impunity, are not devoid of risk, from the fatal effects they occasionally entail.

The symptoms which characterise the action of this drug upon the digestive canal are,—dulness, loss of appetite, dryness of the mouth, occasional attempts at regurgitation, continued borborygma; pain in the abdomen, testified by stamping the hind legs; the head turned towards the flanks; continuous and rather violent colic; and, lastly, the condition of the excrement, which at first is dry, then moist, and covered with a thick coating of mucus, and at last expelled in a fluid state, in great abundance and at close intervals.

When the emetic is productive of poisonous effects, the dulness is much greater: the animal moves like an automaton, its gait being uncertain and tottering; the whole body is agitated by shivers, and sometimes even by tetanic convulsions, the head being in continual motion. The *decubitus* is often interrupted by violent and spasmodic colic: sometimes the animal rushes against the wall, as

in vertigo, and subsequently falls in a state of excessive exhaustion, dropping down bodily, and expiring.

The lesions produced throughout the whole extent of the digestive canal by the action of the emetic tartar are various: the most general is vascular congestion of the mucous membranes to a greater or less degree, from the simple arborization, in isolated and circumscribed patches, to a deep red or even black hue, diffused throughout a vast extent.

This congestion has nothing specific about it, so long as it is produced by a perfect solution of the emetic in a quantity of fluid; it then resembles all those erythemata of the intestinal canal caused by its contact with any irritating substance. But when the antimony administered is only held in suspension under the form of a coarse powder, and in too small a quantity of fluid to permit it to dissolve, the congested mucous surface then frequently presents a decidedly specific character: each grain of the salt leaves its impress upon the part with which it came in contact, by transforming its epithelium into a circular scar, which, detaching itself, leaves behind a greyish and isolated or confluent ulceration, according to the quantity of the salt given and its state of dissolution.

This peculiar kind of alteration,—which is in fact one of the properties of the action of all caustic salts, divided into multiplied fragments of minute dimensions,—is especially manifested when the medicine is given in a solid state, in any sticky substance, such as honey. Its action then, even when given in the most concentrated doses, is exercised on the same place; and this spot is transformed into an eschar, the dimensions of which often exceed that of a five-franc piece. This eschar is of a greyish black hue, thick in substance, and formed from the whole of the mucous membrane, frequently encroaching on the subjacent cellular tissue, and sometimes even on the muscular membrane: the adjacent parts are strongly injected with red, and the demarcation separating them from the eschared parts presents a yellow tinge.

At a more advanced period of the disease, a fossa occupies the depth of this yellow ridge, in consequence of the inflammation, which becomes developed in the living parts, for the elimination of the eschars; and, when we study the condition of the organs at the period of completion of the work, we find the surface of the intestinal mucous membrane presenting great loss of substance, arising from ulcerations, whose bases consist of an agglomeration of little fleshy granules of a greyish hue, which form the basis of the cicatrization, in those cases where life can be sustained while lesions of so grave a nature exist.

Inflammation of the digestive mucous membrane is less fre-

quently observed from the administration of antimony than is a simple state of congestion, because the mortal effects of the poison generally come into action before inflammation has had time to develop itself. Where inflammation does succeed to simple congestion of the mucous membrane, it manifests itself with all the characteristics peculiar to such pathological action when established in the digestive mucous canals; viz. by intense redness—by thickening—by serous infiltration of the subjacent tissues; and to these characters are united those of suppuration at the points exposed by the elimination of the eschars. Such is a brief account of the lesions most commonly produced by the direct contact of antimony with the digestive mucous membranes. These lesions have in themselves nothing that specifically appertains to the action of antimonial salt: in their mode of formation and physical aspect they resemble alterations such as are produced by irritative caustics.

However, in some few exceptional and ill-understood cases, a concentrated solution of tartarized antimony will, by its contact with the intestinal mucous membranes, create a specific eruption of pustules, of a vivid red colour, large at the basis, and conical at the summit, which, from their form, and the general aspect they communicate to the intestine, recall to mind the pustules of the rot. This effect, which is produced occasionally on the digestive mucous membrane when under the influence of the antimony, is the ordinary consequence of the action of this same salt on the external tegument, where friction with the antimonial solution creates a confluent eruption of small, reddish, acuminate, dense pustules, which, when touched by the fingers, feel like tuberculous granulations, and are covered on the top at the latter stage of their development with an adhesive crust.

We have spoken of the alterations which arise immediately from the action of tartar emetic. The ruptures of the walls of the reservoirs into which the solutions of this salt are poured, are, in our opinion, the more complex effects of this powerful modifcator: it is probable that the energetic contraction which precedes these ruptures, and is a sufficient cause for them, is less the consequence of direct contact with the antimony than a result of the general influence which it exercises over the whole of the digestive apparatus when absorbed and carried into the circulation. What chiefly leads us to the formation of this opinion is an observation of those phenomena which are so specifically manifested at the side of the digestive canal when a solution of emetic tartar is injected directly into the veins.

All the lesions which we have enumerated, to whatever class they belong, may become apparent throughout the whole extent of

the abdominal digestive apparatus. Nevertheless, there are some particular departments of this apparatus in which they are most frequently observed; such, for example, as the right bag of the stomach (the left one, protected as it is by its epithelium, easily resists even the corrosive action of the emetic), the larger curves of the colon, and particularly the cœcum. This is accounted for by the functions of the organs we have specified, which retain matters taken into the system for a greater length of time than the others do, and are thus longer under the influence of their contact.

Respiratory and circulatory apparatus.—The emetic, when administered through the digestive passages, does not confine its effects to the parts with which it comes in contact. Transported by intestinal absorption into the current of the circulation, it mingles with the blood, and for the time communicates to it new properties which manifest themselves to the observer in the important modifications introduced into the organic functions. One of the most remarkable of the evident effects of the absorption of antimony is the abatement it invariably produces in the respiratory action. Messrs. Trousseau and Pidoux have already pointed out, in their "*Treatise on Therapeutics*," this singular influence of the emetic on the respiration of the human being: "We have seen," they say, "the number of respiratory movements so much decreased, that the patients submitted to the experiment have not breathed more than six times in a minute, while they had previously breathed sixteen, twenty, and twenty-four times in the same period; and we could not have avoided feeling considerable uneasiness if we had not been re-assured by the good looks of the patient and his assurances of being no worse." The emetic antimony likewise produces this effect upon the horse. We have seen animals in whom the respiration was so much slackened after the administration of the emetic tartar, that at times the flanks appeared motionless; and as much attention was requisite to detect the commencement of the inspiration and expiration, and see the rising or lowering of the flank, as is necessary to follow the course of the second hand of a watch in its rapid circle of the minute. In those animals in which the phenomena produced by medicine are most intensely developed, the respiration was, in point of fact, but from two to three in a minute; but these are rare cases. In general, the respiratory movements are diminished but one-third or one-half. We might cite a long series of observations in support of what we have half advanced; we shall select one from our collection, wherein the influence of emetic tartar on the respiratory action is very strikingly demonstrated. Setting aside some slight shades of difference—some degrees of intensity in the sensible

manifestation of the action of the medicine—all the other observations which we could narrate would be but a repetition of this one.

A horse, given up for the purpose of experiment, condemned on account of glanders. In tolerably good condition. Good appetite. The respiratory organs recognised as being healthy by all the different modes of exploration. Eight respirations a minute, and 29 pulsations of the glosso-facial artery.

On the 30th of November the animal was dieted, and put on white regimen. On the 1st of December, 10 grammes of emetic tartar were administered at fifty-two minutes past nine o'clock. Twenty-five minutes afterwards no change had taken place in the 8 respirations and 29 pulsations.

At five minutes to eleven o'clock, that is to say, three hours after the administration of the medicine, the respirations were 7, and the pulsations 27.

At half-past eleven,—5 respirations and 26 pulsations.

At half-past twelve,—5 respirations and 23 pulsations.

At two o'clock,— ditto ditto.

At half-past four,—7 respirations and 28 pulsations.

At twenty minutes to nine,—8 respirations and 29 pulsations.

The number of respirations had diminished 4, and the most marked effect was evident three hours after the administration of the drink. Dieted.

On the 2d of December, at ten minutes to nine, 15 grammes of emetic tartar were administered in a drench. Previous to this administration the respirations were 10 and the pulsations 30.

At forty-five minutes past nine, there were only 5 respirations and 22 pulsations.

At half-past ten,—6½ respirations.

At four o'clock,—7 respirations and 22 pulsations.

At half-past eight,—7 respirations and 23 pulsations.

To-day the number of respirations had diminished one half, within fifty-five minutes after the administration of the medicine. The animal suffered slightly from colic. Dieted.

On the 3d of December, at twenty-five minutes past eight, 30 grammes of emetic tartar were administered; there were, previously, 11 respirations and 32 pulsations.

At twenty minutes to ten,—5 respirations and 18 pulsations.

At twelve,—5 respirations and 17 pulsations.

At ten minutes to one,—3 respirations and 17 pulsations.

At fifty-five minutes past five,—4½ respirations and 20 pulsations.

At seven o'clock,—5 respirations and 20 pulsations.

At ten minutes to nine,—6½ respirations and 25 pulsations.

The number of respirations here diminished 8, and that of the pulsations 15, or one-half. No inspiratory or expiratory action was executed by the nostrils: the air rushed into the nasal cavities as into a metallic tube in which an imperfect vacuum had been formed. All that could be observed on the external surface of the *alæ* of the nose was, a slight and almost imperceptible vermicular motion.

The animal experienced some attacks of colic, but they soon passed away. Dieted.

On the 4th of December, at fifty-five minutes past nine, 60 grammes of emetic tartar were administered, of which 20 were in a drink and 40 in a drench: the respirations were then 5, and the pulsations 26.

At ten o'clock the animal was seized with general and convulsive shiverings, which rendered it impossible for us to keep a strict account of the number of respirations.

At half-past ten, there were 6 respirations, and 36 pulsations.

At half-past twelve,—6 respirations.

The motions of the flank were almost imperceptible,—the expiration slow,—and the muscles of the *alæ nasi* remained motionless for several seconds.

At three o'clock, there were $4\frac{1}{2}$ respirations.

At five o'clock,—4 respirations and 37 pulsations.

At nine o'clock, the number of respirations were 7; the animal was tranquil, but somewhat unsteady on his limbs.

At two o'clock the febrile action had ceased; the number of respirations was augmented at first, but it afterwards came to be $4\frac{1}{2}$.

The 5th of December, at thirty-five minutes past nine, 100 grammes of emetic tartar were administered in a drench: the respirations were then 7, and the pulsations 32.

At forty-seven minutes past nine,—5 respirations and 30 pulsations.

At eleven,—5 respirations and 28 pulsations.

At one,—4 respirations and 28 pulsations.

At two,—5 respirations and 28 pulsations.

At twenty minutes to four,—4 respirations while quiet, and 10 after exercise.

At five,—5 respirations and 30 pulsations.

At six,—ditto ditto.

At eight minutes to nine,—6 respirations and 31 pulsations.

Colic came on five minutes after the administration of the 100 grammes; the animal fell with all its weight upon the ground, but got up again immediately, manifested great uneasiness, and stamped. Towards two o'clock he became calm and dull, suffering from great prostration; the head underwent a very remarkable lateral

action. On the surface of the buccal mucous membrane an eruption of reddish pustules, of about the size of a two-franc piece, was observed. The animal was destroyed on the day after this administration. The post-mortem examination shewed that inflammatory lesions had taken place throughout the whole extent of the mucous membrane of the intestinal apparatus, and upon the left section of the stomach were patches of erosion.

A decrease in the number of respirations is a very common phenomenon, resulting from the influence of antimony; but it is sometimes wanting, from the effect of certain causes which have yet to be understood. And it even occasionally happens that the effects produced on the respiratory rhythm by this drug are exactly the reverse; that is to say, the respiration becomes accelerated under the influence of the absorption of tartarised antimony.

The sensible influence of the antimonial salt manifests itself in a less evident manner on the circulation than on the preceding functions. Nevertheless, its action, when absorbed, becomes evident by a slowness and attenuation of the arterial pulsations: of these two phenomena the latter is generally more evident than the former. The number of pulsations may remain the same, or even may increase; but in general the pulse becomes smaller, more thready and softer, while the influence of the medicine lasts. We must, however, hasten to add that these results are by no means invariable, and that it frequently happens that the pulse hardens, and becomes more rapid under the influence of antimony, especially when the local action which it produces upon the digestive mucous membranes causes an outbreak of intestinal inflammation. The effects of the medicine on the small circulation depend on the modifications undergone by the mucous membrane of the intestine in contact with it. The visible mucous membranes betray their modifications by their alteration of colour, without there being any thing in this fact worthy of specific remark. The material signs left by emetic tartar upon the respiratory and circulatory organs do not belong specifically to this antimonial preparation, but are equally produced by the exhibition of all antimonial poisons.

The whole of the blood in both veins and arteries is black, fluid, and diffuent: in the ventricular cavities of the heart the serous membrane is raised up by large thick ecchymoses, which gives it the appearance of being irregularly marbled, especially on the right side; so sanguineous coagulum exists in either cavity.

The internal membrane of the vessels rapidly takes on a reddish hue in bodies which have been dead but a very short time.

The substance of the lungs is perforated by numerous blackish spots, a species of ecchymosis arising from the filtration of the

blood in circumscribed spots in the parenchyma of the organ, through the capillary net-work.

The pleural membrane is usually of a violet hue, which arises as well from the injection of its own vessels with black blood as from the deep colour of the pulmonary tissue which it covers.

Such are the lesions produced in the circulatory and respiratory systems by the action of emetic tartar, when, administered through the digestive passages, it passes from the canals and is absorbed into the bloodvessels; but *it often happens* that, when administered *in a drench*, and in an imperfect state of solution, instead of regularly following the course of the œsophagus, it penetrates through the larynx into the trachea, and filters through the bronchial tubes into the pulmonary substance.

This accident, which *very frequently* happens where the mode of administration I have mentioned is resorted to, is not, however, more peculiar to emetic tartar than to any of the other styptic or astringent substances thus forcibly injected into the body in a liquid state. In passing by the narrow entrance of the pharynx they cause a violent astriction of the mucous membrane of that cavity, destroy for the moment its sensibility, and paralyse the subjacent muscular layer, the contraction of which is necessary in order to propel the solid and fluid matters introduced into the mouth towards the œsophageal opening. Thus modified, the pharynx becomes but a species of inert funnel, into which the fluids fall, and then follow the course of the laws of gravity. The laryngeal mucous membrane, bathed with an astringent fluid, is, in a manner of speaking, tanned by its contact, loses the exquisite sensibility which ordinarily characterises it, and suffers the styptic solution, which the animal swallows and *respires at the same time*, to pass into the larynx without any resistance on the part of the muscles of that organ, or of those the functions of which are synergetic with it, without even appearing conscious of the wrong course which this matter takes;—a phenomenon which singularly contrasts with things when in their natural state, where we see the slightest degree of irritation applied to the orifice of the larynx putting all the expiratory muscles into simultaneous action, and causing them to combine so energetically to expel from the air-passages all such matters as are foreign or injurious to them.

Recueil de Med. Vet., May 1846.

THE VETERINARIAN, MARCH 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

THE Medical Registration Bill of 1847, published in the *Lancet*, is a document our members of Council will do well to thoughtfully peruse; in order that they, when the time shall arrive for them to go to Parliament with some similar bill, may be prepared to state what their requirements are, and, by watching the progress and fate of the medical bill, may also be in a situation to anticipate what of such requirements they are likely to obtain. The great and crying evil with the medical people, as with us, is, that their profession is over-run by unqualified practitioners, who, while they are taking the bread out of the mouths of the qualified, are working an incalculable amount of injury upon the public—"incalculable," we say, because not a tithe of their hidden misdeeds comes to light. We need not to be told that, throughout the country, there are many worthy, clever practitioners, both of human and veterinary medicine, who are not duly licensed, or, in other words, not "members of the College," either of surgeons or veterinary surgeons, or of the Apothecaries' Company: these, however, constitute but exceptions to the host of quacks and impostors by which both professions are over-run, and which it is one main object of the present Medical Registration Bill to put down. Such a bill, passing the legislature, cannot fail to work a great and wholesome reform in the medical world: it will do more for surgeons than has ever yet been done for them by the government of their country; and it will, as a precedent, to us hold out at least fair prospects of being one day similarly done by. We, therefore, cordially wish the supporters of the present bill success in their undertaking; that they deserve it, we, for our part, think cannot be better shewn than by the perusal of the bill itself; of which, so far as concerns ourselves, we purpose giving an outline here, seeing that some of our subscribers in the country may not have an opportunity of referring to it.

The bill appoints three Registrars: one for England, one for Scotland, and one for Ireland, subject to the jurisdiction of the Secretary of State, and payable out of monies receivable by them for certificates, to be taken out annually by such practitioners as have been duly registered. The first or general registry being made, free of expense, by the registrar, of every "physician, surgeon, or apothecary" whose diploma is dated prior to the passing of the act.

The register, in which such registry is made, to be evidence in all courts of justice and other places of the individual being duly licensed; as likewise authority for him to "demand and recover, in any court of law, with full costs of suit, reasonable charges for medical and surgical advice, visits, and attendance;" and "none but (such) registered persons, or those in practice before the passing of this Act, to recover charges."

The 12th clause of the bill repeals the former enactment, "requiring five years' apprenticeship to an apothecary:" such enactment having been found "to obstruct the efficient education of students in medicine, it is expedient that the same should be repealed."

13. And if any person shall, after day of act or practise as a physician, surgeon, or apothecary, without being duly registered, and without having a certificate in force at the time of his so acting or practising, he shall, on conviction before a magistrate, "forfeit and pay a sum not exceeding £5, nor less than 40s. for every such offence."

21. Establishes "uniformity of education, qualification, and fees, throughout the kingdom."

22. "And be it enacted, that the said Secretary of State may, from time to time, require returns to be made in such form, and including such particulars as he shall think fit, respecting the examinations to be conducted for medical degrees, diplomas, and licenses; and it shall be lawful for any person deputed by the Secretary of State, being a physician, surgeon, or apothecary, registered under this act, to be present at any of the said examinations, and to report to the said Secretary of State; and if he shall be of opinion that the regulations approved by Her Majesty in Council for the examination and grant of letters testimonial as physician, surgeon, or apothecary, have been infringed, evaded, or neglected by

any of the examining bodies, it shall be lawful for the said Secretary of State to admonish the said offending body; and if such admonition be neglected, then to direct the Registrars as aforesaid to refuse to register upon the testimonial of the body so in default, until the conduct of such body shall be altered to the satisfaction of the said Secretary of State."

23. "And be it further enacted, that the duly appointed examiners of the candidates for degrees, diplomas, and licenses in medicine, shall be empowered, under such regulations and restrictions, and at such times as shall be approved by the Secretary of State, to attend with the candidates for examination at the public hospitals or other public medical institutions, and also at any workhouse, for the purpose of ascertaining the practical knowledge of such candidates from an inspection of sick and diseased persons."

24. Provides that the act shall "not affect the examinations of students of two years' standing at the time of the passing of the said act."

26. Provides that the act shall "not affect the trade or business of a chemist or druggist, in the buying, preparing, compounding, dispensing, and vending drugs, medicines, and medicinal compounds, wholesale or retail."

27. "And be it enacted, that every person who shall be registered and possess a certificate in force under the provision of this act shall be exempt, if he shall so desire, from serving on all juries and inquests whatever, and from serving all corporate, parochial, ward, hundred, and township offices, and in the militia, and that the name of such person shall not be returned in any list of persons liable to serve in the militia, or in any such office as aforesaid; and no person shall be entitled to such exemption aforesaid on the ground of being a physician, surgeon, or apothecary, who does not possess such certificate then in force as aforesaid, any act to the contrary notwithstanding."

Such are the parts of the said bill applicable in an especial manner to ourselves, and which must constitute leading features in any bill of the kind the veterinary public may prepare to lay before parliament. Indeed, it were almost to be desired that such a bill were already prepared, to follow in the track of such a wholesome and powerful predecessor. At all events, should the medi-

cal bill receive the sanction of the legislature, one like it from the body of veterinary surgeons ought, as soon as convenient, to make its appearance.

The announcement in the latter part of Mr. Mayhew's communication—that the “draft of a new charter has been *by them* (the Professors of the Royal Veterinary College) prepared—has been approved of by the Governors, and will be speedily recommended to her Majesty by the Government”—would be sufficiently startling did it amount to any thing more than we have been given to understand was, or would be, the case on the occasion of the deputation from the Council having an audience with the Committee of Governors of the Royal Veterinary College. We had hoped that the Governors present at that memorable meeting had seen reason to believe that, on the part of the Council, there was—there had been—no intention to act in any other course save what tended to the good of the veterinary profession; and that it was only when such good militated against it, that any thing was done by the Council unfavourable to the school over which they presided, or unacceptable to the professors and teachers in their employ at that school; that such was, and ever has been, the intention and desire of the Council, could not be disputed; that it is possible they may have erred in their attempted fulfilment of such good intentions is not to be denied; and that they are ready to retrace their steps and rectify such erroneous acts will not be doubted, providing “erroneous” their acts or deeds can be satisfactorily shewn to be. If in the face of all this the Governors will, ill-advised and pushed on by their Professors, go for a separate charter—which we can hardly think they will—all we can say is, that the schools will prove the parties who must rue it. Whether the veterinary profession, as at present constituted, must bow to the schools or the schools to it, we apprehend does not require an Œdipus to determine.

Mr. Goodwin's paper in our last number will set veterinary people and others thinking on the subject of horse statistics. The fact is not to be denied, that “good” horses have become scarce in England; and it is pretty evident that the principal—if not the

sole—cause of this scarcity is the large export trade in horses this country has now for some years been carrying on with foreign nations. It has now become a sort of established annual custom with France, and Belgium, and Russia, and Germany to send their *marchands de chevaux* and others into England to attend our large horse fairs, in order to make selection of our most promising cattle, and, regardless of cost, to purchase them for Royal or private studs, on whose account they have received commissions. No harm to us, probably, would accrue from this—at least, none but what might in a few years or so be provided for and guarded against, were it not too frequently the object of these foreign buyers of our horse ware to purchase and carry away with them as many of our finest breeding mares as they could for money lay their hands upon. The honey we can spare; or, if we can but ill spare it one year we will take care to augment our stock against the next; but, deprive us of our bees, and you render us “poor indeed:” you take away

“The prop that doth sustain our house.”

And yet this is not a matter in which Government very well can, or, indeed, ought to attempt to interfere. The Arabians prohibit, and prevent as far as they can, the carrying away of mares out of their country; but for the English to pass an edict of this nature would be harmful if not destructive of our international trade, which, so far as horses are concerned, we have not as yet ascertained to be good or to be bad for us.

Mr. Goodwin, as it would appear from his paper, does not view this horse commerce in any evil light; or, at least, if he does, it is not that he would have it put a stop to, but would provide against its effects by the establishment, on a large scale, of Government or Companies' Breeding Studs: the latter, we would say, for several reasons, being preferable to the former, and the latter also rendered the more efficient the fewer the hands by which they were conducted, and the smaller the proprietary having any right to interfere with them. From breeding establishments on large scales, under an honest and judicious and liberal management, much, indeed, might be expected, not only as regards the numerical increase of our young stock to meet any demands of the horse

market, nor merely as respects the safe-keeping in which our valued brood mares would then be, but—as Mr. Goodwin has observed—in respect to our *knowledge of breeding*—knowledge in which, as he has with truth alleged, we stand very much below the continental horse people. Doubtless, many valuable facts pertaining to the subject, and curious facts too, lie scattered about in our own country, some in possession of one, some of another breeder; but where is the record of them—the repertory in which they are to be found when required? and who will answer that they are, traditionally handed down from father to son as they now appear to be, of that sterling value they might be made to be to us, stood they fairly upon public record? For these reasons—for the last one especially—we are, with Mr. Goodwin, strong advocates for reform in our breeding establishments; and we should hope the day is not far from us when we may look for some improvement of the kind. Mr. Goodwin has promised us “a sketch” of a plan for a National or Company Breeding Establishment; and, looking to the experience of that gentleman in the Royal breeding stud, from time to time in keeping at Hampton Court, and to his extended observations among the private breeding farms of the north, we can entertain no doubt that his plan, whatever it may be, will have for its basement practicability and efficiency.

The startling fact of the blood or seed of one sire or father shewing itself in the get of a subsequent sire, even though that sire be of another species, as reverted to by Mr. Goodwin, will be found authenticated by the letter addressed by the Earl of Morton to the President of the Royal Society, extracted from the society’s “Transactions” into our Number for the present month. The phenomenon, thus put out of the reach of doubt, has received pretty ample confirmation since; and as it is one of those facts which seem to have had less attention than it is deserving of paid to it by obstetric writers, it shall, at another time, be our affair to look a little into it.

VETERINARY JURISPRUDENCE.

COTHER *v.* NEWMAN.

Mr. Jervis and Mr. Welsby were counsel for the plaintiff, and Mr. Petersdorff for the defendant.

The plaintiff in this action was a barrister, and the defendant was a horse-dealer. The action was brought to recover the value of a horse, under the following circumstances. The plaintiff seeing an advertisement for the sale of horses, went to the defendant's yard, and there he agreed to purchase a horse for £45. He paid the money, received a warranty of soundness, and took the horse away with him. He used him in a Clarence carriage; but at the end of eight days, his friend, who had been present at the time of the purchase, called and saw the horse, and they were of opinion that it was not the same horse that the plaintiff had purchased.

The plaintiff then went to the defendant's yard, and stated that it was not the same horse, and required the defendant to return the money. The plaintiff then said he should stand upon his warranty, for the horse had broken knees.

After some discussion, the defendant said, if the plaintiff would put the horse in the stable he would repay him, if Mr. Cother would be quiet about it. This the plaintiff would not do, and he afterwards caused the horse to be sold. The only witness called as to the identity of the horse was the plaintiff's friend, who was present at the purchase, and he thought that it was not the horse.

Mr. Justice Wightman said, it was purely a question of identity. It certainly was singular that a gentleman in the law should have taken the horse home, and kept it for eight days, before he discovered that it was not the one he intended to purchase. It certainly was very strange.

A Juror.—But, my Lord, the horse's knees were broken, and yet there was a warranty.

Mr Justice Wightman.—Gentlemen, I must tell you, that there is not any question of unsoundness raised.

The Jury returned a verdict for the defendant.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of January 27, 1847.

A Special Meeting, called to confirm the Bye-Laws passed at the former sittings, in accordance with the requirements of the Charter.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, HENDERSON, ERNES, MAYHEW, CHERRY, sen., WILKINSON, FIELD, and JAS. TURNER.

The minutes being read and confirmed, the undermentioned motions, of which due notice had been given, and which were passed at the two last sittings, were read over and discussed *seriatim*, and finally confirmed.

On the motion of *Mr. Mayer*, it was resolved, “That the addition of the words ‘and has produced the certificates required in section 6,’ be added to Law 1, section 2.”

On the motion of the same gentleman, it was resolved, “That in Law 3, letter A section 6, the words ‘cattle, sheep, pigs, and dogs,’ be added.”

On the motion of the same gentleman, it was also resolved, “That in section 5, after Law 3, the following Law be added, from the Charter, ‘That no Professor of any or either of the Colleges of which the person desirous of becoming a member of the body politic and corporate shall have been a student, shall in any way or manner act or interfere as the Examiner of such person.’”

The following Order in Council was omitted to be inserted in the last Report:—

On the motion of *Mr. Gabriel* and seconded by *Mr Arthur Cherry*, “That the revision of the Registry being highly important, a Standing Committee be appointed for that purpose, to consist of five members of Council, with power to add any member of the College to their number as corresponding members. The Committee to be termed ‘The Registration Committee,’ and all matters connected with that subject to be referred to them. The Committee at present to consist of Messrs. Braby, Arthur Cherry, Ernes, T. W. Mayer, and Mayhew; and that the election be annual.”

Notices of motions for alterations in and additions to the Bye-Laws, were given by Messrs. Jas. Turner, Arthur Cherry, Henderson, Mayhew, and Gabriel; and they were directed to be suspended at the Secretary's office.

Some discussion ensued on these various notices, but not of any importance.

Sitting of February 17, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, HENDERSON, ERNES, MAYHEW, CHERRY, sen., J. TURNER, WILKINSON, BAKER, GOODWIN, MAYHEW, F. KING, and FIELD.

Minutes read and confirmed.

THIS sitting, being called for two special objects, viz. to make arrangements for the third Annual Report, and to elect a member of the Board of Examiners, and for general routine business,

It was moved by *Mr. Arthur Cherry*, and seconded by *Mr. Baker*, "That a Committee be appointed to draw up the Annual Report." The mover stated, that the reason of his moving for a Committee was, for the purpose of giving a more carefully digested report of proceedings than could be done in open Council; while it still left the Council free to adopt or return the result of the labours of the Committee for revision, should the Council not approve of the draft. The motion met the wishes of the Board, and was carried without opposition.

The Committee was nominated as follows:—Messrs. Gabriel, Mayhew, Arthur Cherry, and Ernes.

Mr. James Turner, in a neat speech, proposed, "That Mr. Dalrymple, M.R.C.S., &c., &c., be elected to the appointment of Examiner," vacant by the retirement of Mr. Liston.

Mr. Mayhew seconded the nomination of Mr. Turner.

Mr. Arthur Cherry begged leave to nominate, for the same appointment, Mr. Samuel Solly, F.R.S. and M.R.C.S.; and having explained the grounds upon which he considered that gentleman as being particularly qualified for an Examiner,

Mr. Cherry, sen. seconded the motion.

A long and animated discussion ensued, as to which of these gentlemen should be elected, each having such high claims to dis-

tion. A ballot ensued, which shewed that Mr. Solly was elected, the numbers standing as 8 and 4.

A letter from Dr. Mercer, in reply to the last directed to be sent to him, was then read: we wish we could speak in its praise. An irritable discussion ensued, leaving the matter still undecided.

Letters from Mr. Isaac Seaman and Mr. G. Waters, jun., two of those four young men who had by recent decision of the Council received their diplomas, were then read, and were of so disgraceful a character that they were ordered to be returned to their authors, as totally unfit for comment. It is to be regretted, that young men should so lose themselves by pursuing a course that must inevitably end in their own injury.

The Secretary was directed to attend, in due time, to the insertion of the advertisements, according to the required regulations of the Charter, for the calling together the Annual General Meeting, which will take place on Monday, May 3d.

MISCELLANEA.

NEW QUEEN'S PLATE ARTICLES.

THE following rule (among others) has just been issued for the future observance of owners and riders of all such horses as shall run for Her Majesty's Plates:—

When the age or qualifications of a horse entered for any of Her Majesty's Plates shall be objected to, either before or after running, the stewards of the races at which such plate is run for shall have the power to order an examination of the horse's mouth by competent persons, and to call for all such evidence as they may require; and their decision shall be final, unless they shall think fit to refer the matter to the stewards of the Jockey Club for the time being, in which case the decision of the said stewards of the Jockey Club shall be final. A certificate shall not be granted to any horse objected to until the question of his qualification shall be decided in the manner herein prescribed.

A CENTENARIAN ASS.

A DONKEY, belonging to Mr. Gandey, 68, Upper Bedford-street, Brighton, died on Monday last (the 1st ult.), at the advanced age of 100 years ! It was a great favourite with its master, and was well provided for up to the time of its death.—*Globe*.

* * * Being somewhat astounded at this phenomenon, and looking upon it as one of those groundless tales which too often find their way into newspapers, we caused some inquiry to be made concerning the centenarian ; and the result has been the following letter to us from Mr. Gandey himself, who is a respectable proprietor and purveyor of donkeys at our fashionable seaside resort, Brighton :—

“ Sir,—A person called on me, and wished me to send you the particulars about a donkey that died here a few days ago, belonging to me. Old Gipsy Lee died on Lewes Race Course, ten years ago, at the age of eighty-five. He declared to me that she (the ass) was the property of his father when he was a little boy. I myself have had her thirty years. And the person whom I had her of, who lived the other side of Lewes, had her thirty-five years. There was not one of the gipsies that come to Brighton but what could remember her as long as they knew what a donkey was. She was quite a favourite for her milk, and for her work besides. But I have not milked her for years. I have kept her in a loose box, doing nothing, for I was determined to maintain her until she died. She got so at last, that she would not chew any thing. *She had not one tooth in her head.* We were obliged to nurse her the same as a christian.

I remain, &c.

CHARLES GANDEY.

“ 68, Upper Bedford-street, Brighton,
7 February, 1847.”

 THE HORSE TURNED ECONOMIST.

IN a communication to the “*Times*” newspaper, it is recommended that some plan be set about, in this present time of dearth, to create a saving in race horses’ rations of food.—“ It is calculated,” says this economist, “ that there are two millions and a half of horses in this country. If we suppose a third of this number to eat no corn, the other two-thirds would consume, on the lowest

computation, 30,000 quarters of oats daily. This large quantity would supply three millions of our fellow-creatures, with a wholesome dinner of oatmeal. Fourteen pounds of oats will yield eight pounds of that kind of meal which the Scotch and Lancashire folk are glad to live upon. Who would wish to put even a horse upon a poorer or 'coarser diet,' as the phrase goes, if there were not a need's be? But we have in hand at this time an immense stock of hay of the most excellent quality, and which is at a low price, owing to the abundant crops of the two last seasons. Seriously, we should make the best use of this providential gift. If the human kind could eat hay, there would now be no famine in the land; but as this is not the case, let an order immediately issue from the Horse Guards to substitute hay, the natural provender of the horse, for corn, the proper food of man*. In these piping times of peace, what exertions are required of our cavalry, that their animals should be feeding upon the bread of the people? I would suggest also to the brewers in London, who are encouraged by act of parliament to dismiss the malt from their breweries and use sugar instead, to dismiss also the corn from their stables. As to those plethoric beasts which crawl in front of their drays, and live upon the fat of the land, their sleek appearance is but an ill-timed mockery of the gaunt misery visible upon the outward man in our streets. The racing studs, too, of England, consisting of 1000 horses or more, which *are most wastefully fed out of the grooms' hands!* might be made to eat their food out of the manger; and if they were stinted a little, or even the total abstinence pledge were enforced upon them, while it would be fair alike for all at the running-time, it would certainly be much better for poor human creatures. The agricultural horses, except in the more favoured districts of the country, work hard upon no corn; and, really, if a good example were set, as it ought to be, by the high-bred ones, of eating only hay, this custom, universally adopted, would confer a great boon upon the starving people."

* * The above is a very proper and timely suggestion, though, as it would seem, coming from a person who is more of a statesman than of a horseman. Horses used for the purposes of slow draft—such as farmers' and brewers' and coal-merchants' horses—might do very well without corn or pulse; but racers and hunters, and hard or fast worked riding and driving horses, will require either one or the other: still, it behoves all horse-owners to assist

* An order has been issued from the Horse Guards, reducing the daily allowance of oats to every cavalry horse from 10 lbs. to 7 lbs..

in carrying out this humane and commendable retrenchment to the extent of their power. In peaceable times like these, our war horses are fairly mulcted of a portion of their rations; nor will they thereby sustain any great loss, providing the diminished ration of provender be made the most of. Establishments and individuals who are constrained or determined to feed their horses on hay and corn—to the exclusion of any other kind of food that might be made available—are recommended to bruise their oats, and cut their hay into chaff; procuring hay of the best quality they can, and such as has been early and well got, with the seeds in it. Attention to all this will go a long way towards compensating for the lost or surrendered ration in the usual allowance of corn. Better still, no doubt, for our scheme of retrenchment, where corn can be saved altogether, as in the case of agricultural and brewery horses it very well can, on account of the efficient substitutes for it farmers and brewers possess in their own establishments. And at such a time as the present, when gaunt and meagre famine is awfully staring us in the face, we repeat, it becomes our bounden duty to make the best of all substitutes for aliment of a kind on which human as well as brute creatures can feed.—*Ed. Vet.*

MORTALITY AMONG GEESE, OCCASIONED BY BILIOUS FEVER.

By M. DUPUY.

M. R., of Toulouse, consulted us respecting a mortality that had broken out, a few days before, among his geese. He had at his house, near Castanet, twenty-six of these animals, and in less than ten days their number was reduced to seven. He found nothing, either among the aliment or their habitation, to which the mortality could be attributed. We opened two of them.

We observed in the intestine near the rectum a great number of rounded substances, of variable extent, from the size of a lentil to that of a nut. They were formed of filiform prolongations of the mucous membrane, separated only at their free extremity, and covered by a yellow granulated matter of slight consistence. The remainder of the mucous intestine, throughout its whole extent, was remarkable for the great development of its villousities, and by two small white points a little deepened, appearing otherwise in every part to differ only in the smaller development of their villousities.

The whole of the digestive canal, from the gizzard, was filled with puriform mucosities, and not containing any food. The muscles were in general of a deep red colour. The liver was of a vivid red, but preserved its ordinary consistence.

It has been difficult to give an account of the nature of these peculiarities. We have carefully examined every part, but we have found nothing beyond the usual villosities.

Whence, then, comes the yellow matter which covers these places? Is it a secretion from these follicles? The colour of the liver induces us to think that this yellow matter, which is spread over the intestine, is the bile in an altered state. We are disposed to regard this malady as an hepato-intestinal inflammation: sometimes we should call this affection bilious fever.

It was determined to destroy the whole of the remaining birds.

ROYAL VETERINARY COLLEGE.

[From the Mark Lane Express.]

Mr. Fisher Hobbs having brought forward his motion on the subject of the annual grant made by the Society to the Royal Veterinary College, for the purpose of promoting the application of veterinary science to the pathology and diseases of cattle, sheep, and pigs, Mr. Denison, M.P. detailed to the Council the circumstances under which that grant originated, and the willingness of the College to afford the fullest investigation into the mode in which they had endeavoured to carry out the views of the Society.

On the motion of Mr. Shaw, seconded by Mr. Shelley, the following Committee were then appointed to confer with the College on the subject, and report to the Council the course which had been pursued for the purpose of obtaining the objects proposed by the Society; viz.

The Duke of Richmond
Mr. Evelyn Denison, M.P.
Mr. Fisher Hobbs
Mr. S. Bennett

Mr. Miles, M.P.
Mr. Shaw
Mr. Shelley.
Mr. Brandreth.

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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

[Continued from p. 127.]

NAVICULAR ARTHRITIS.

TWELVE years after having communicated to Messrs. Coleman and Sewell the results of his researches into the morbid causes of "groggy lameness," i. e. in 1828, Mr. Turner read a paper on the subject before the Veterinary Medical Society*: prefacing it by stating that it was a "copy of the above-mentioned communication, with this reservation—that although twelve years' experience in active practice since that period had induced him to draw some other inferences which may not exactly accord with the first impressions, yet they will seem to harmonize in the aggregate;" adding, "I believe I am correct in stating, that before the year 1816, the (St. Pancras) College Museum, splendid as it then was, contained but a solitary specimen of the navicular disease, and which was simply a diseased navicular bone, divested of its ligaments and tendon; but Mr. Coleman has on several occasions since candidly acknowledged in his lectures, that he had looked upon it previously to that time as a specimen of disease of very rare occurrence."

* This paper was published in THE VETERINARIAN for February 1829, and was followed by a second paper "On the Symptoms and Cure of the Navicular Disease," read December 4th, of the same year, and published in THE VETERINARIAN for January 1830. Both these papers, together with some observations on shoeing—also published in THE VETERINARIAN, with additional remarks, were collected into a work, published in 1832, well known to the profession, under the title of "A Treatise on the Foot of the Horse," &c. &c. By J. TURNER, M.R.C.V.S., London, 1832.

Thus is the account concluded of the history of navicularthrititis so far as regards our own country. With this, however, the inquiring veterinarian will hardly feel satisfied: he will naturally desire to be informed what has or had been brought to light respecting the disease in other countries. A more satisfactory answer to such a question cannot, perhaps, be produced than by quoting what has been said in relation thereto by—certainly the best author, out of our own country, on the subject, viz.—Dr. Brauell; in the translation of whose work—"An Essay on Podotrocholitis"—we find the following passage:—"The author (Dr. Brauell) commences his "essay" by passing in review the writings of the ancients, wherein he does not meet with a single passage leading him to infer they possessed any knowledge of the (navicular) disease. The earliest allusions to it are to be found in the works of Lafosse, Jun. He was ignorant neither of the seat nor of some of the peculiarities of podotrocholitis; but, confounding it with other diseases of the feet, he failed to give any description of it as a special disease."

It must seem strange to those who have entered the veterinary profession within the last twenty years that navicularthrititis, a disease now-a-days in everybody's mouth, was thirty years ago unknown. In 1809, when I entered the Royal Veterinary College as a pupil, what were the cases of lameness I found in the college stables? I remember well that a very large proportion of them were called cases of "contraction:" that I found to be the prevalent disease, and that it was to which the Professor's chief attentions were evidently attracted. I found these horses wearing shoes of a particular kind upon their lame feet. Some, tips; some, bar-shoes; some shoes with clips at the heels, &c., and all standing for several hours in the course of the day with their fore feet in tubs of water: every now and then being trotted out in hand by direction of the Professors, with the view of ascertaining what progress towards amendment was being made by the treatment adopted. And it was a common circumstance for such cases to continue for months under treatment. I also remember how much of Professor Coleman's attention the complaint called "contraction" occupied—what a favourite the subject was with him, and how ingeniously and learnedly he descanted upon it in his lectures:—He would say—"Expansion of the hoof is effected by the pressure upwards of the frog and the pressure downwards of the navicular bone. By properly thinning the sole, rasping the quarters, lowering the heels, giving the frog pressure, and keeping the horse in a pond all day long, or else tied up with his (lame) feet in a tub of water, we have no difficulty in removing contracted hoofs. Although difficulty there be none, however, in restoring the original

form of the hoof, we too frequently find we have gained nothing by it, because we have not restored the original structure of the parts contained within the hoof. Contraction of the hoof, in consequence of the internal parts being squeezed, produces inflammation of the laminæ, and ossification of them. This causes the horse in galloping to avoid to his utmost coming down upon his heels or to tread upon hard ground, the concussion at such times being great from loss of elasticity in the laminæ, so that the moment he comes to work he falls lame. In nine cases out of ten of what are termed 'groggy' or 'foundered' horses, these parts, in consequence of chronic inflammation, become altered in structure, effusion of lymph or bony matter taking place."

The above extract from the Professor's Lectures, while it demonstrates all absence of knowledge of disease in the navicular joint as connected with groggy lameness, shews the connexion existing in Coleman's mind between such lameness and contraction of the hoof. Contraction, he says, by pressing upon the sensitive parts of the foot, "produces inflammation of the laminæ, and ossification of them," and this occasions *groggy* or *foundered* lameness. In another place he gives the causes of contraction, consisting, summarily, in want of pressure from above and from below. This leads us to an important part of our subject—the connexion between contraction and navicularthrititis.

Of contraction of the hoof there are two kinds:—one is a contraction of the heels, called *lateral contraction*, the other contraction of the hoof *from below upwards*, or *vertical contraction*: by Mr. Turner called *occult contraction*. That of which Coleman is here speaking, and which, in fact, is meant when "contraction" is talked about, is an anormal approximation of the *heels*—and sometimes *quarters* as well—of the hoof. The circumstance, so well-known and appreciated, of horses lame from navicularthrititis, so far from having contracted feet, possessing commonly what are called "open" or "good" feet, clearly indicates that navicularthrititis in nowise owes its existence to lateral contraction of the hoof. The fact of so many horses formerly being considered lame from contraction, whereas, now-a-days, contraction is so little heeded that a case of lameness from it seems a rare occurrence, would appear to argue the contrary, viz. that navicularthrititis must frequently beget contracted hoofs. We cannot believe, knowing what we do now, that the many cases treated in days gone by at the Veterinary College for "contraction," were all lamenesses of that nature; on the contrary, we would almost take upon ourselves, at this remote period of time even, to pronounce that *all* were assuredly not. What were the exceptions, then? Why, probably, cases of navicularthrititis which from want of proper treatment had become in-

curably and permanently lame, and in that state of lameness or unremitting pain or uneasiness of foot, had from constant favouring and resting of the lame foot engendered contraction.

It is pretty evident, from what has been stated (at pp. 122-3) that Moorcroft, in such cases, saw cause of lameness beyond the contraction of the hoof. When Sir Edward Codrington wrote to him, saying, he thought his horse was lame from "contraction," Moorcroft's reply was, I fear your's is "a complicated case;" adding, "I have put you to the expense of a long letter, in order that you may form some opinion whether your horse is *lame from pure contraction*, or from *contraction connected with deep-seated injury of the foot*." Language such as this is pretty indicative that Moorcroft was neither in ignorance of the true cause of lameness in this case of—at all events, *suspected* or *assumed*—navicularthrititis, nor of the formidable and but too frequently—when become chronic—hopeless nature of such a disease; hence his concluding regret, "if I had understood completely facts heretofore stated many years ago, I should have saved myself much disappointment and my employers much expense!" Lateral contraction of the hoof, then, may be taken so far in connexion with navicularthrititis that it will now and then be found to supervene upon that disease, though never, as a cause, to forerun it: a result we might feel disposed to look for much oftener than it occurs, from the circumstance I before mentioned, of the horse favouring and reposing on every occasion he can his contracted and lame foot. In being consulted, therefore, on contraction, we shall, with Moorcroft, be led to inquire, from history, present symptoms, and other circumstances, whether the case before us be one of *pure contraction*, or one of *contraction the sequel of navicularthrititis*.

The time is now come for us to examine into a fact too notorious to be questioned among veterinarians of a certain standing in the profession, and which the account I have given of the lame patients I found at the Veterinary College, during my pupillage in 1809, tends to confirm, viz. that in former days contraction appeared as the ordinary or prevalent cause of foot-lameness; whereas, now-a-days, all or nearly all foot-lameness is set down to the account of navicularthrititis. It is probable that in both these opinions error has played its part, there being a fashion and a fondness for novelty in medicine as in other matters: still, the broad fact is undeniable, that contraction is, as it were, gone out of our sick register to make room for navicularthrititis, and it becomes my duty to afford some explanation of the apparently strange metastasis.

It will hardly be necessary to remind such of my readers as are old enough to have heard our late distinguished Professor's excellent lectures on the foot of the horse, that that was a part he

made his peculiar study, bringing to the task acknowledged talent, and having a field of observation before him in his army practice and college practice to test and work his theories upon, of no less ample dimensions than established character. Coleman found the horses of the cavalry—as indeed were the horses of the community at large in those days—shod with thick-heeled clumsy shoes, wearing their hoofs unpared down, with their frogs thereby elevated above the ground, shrunk and shrivelled, and probably diseased as well, and all from want of pressure in one direction, viz. from the ground, and from having too much pressure in another direction, viz. from being squeezed between the high and contracted heels of the overgrown hoof. The penetrant eye of Coleman discovered not the evil alone but the cause of the evil. “Nature,” said he, “formed the frog of the hoof large and prominent, in order that it might receive pressure every time the animal places his foot upon the ground; but here, the smith, in his ignorance and presumption, has cut it away, suffering the heels to grow down much below it, and the consequence has been degeneration and disease of the former, and contraction of the latter.” From that moment Coleman commenced his reform in the practice of shoeing, and his first efforts—as indeed were his last—were directed to *giving pressure to the frog*. And a great amount of good he in this manner effected. Nay, by such wholesome reform he lived to see—wherever shoeing was properly conducted—what he had all along predicted would one day be the case—the prevention of contraction: his words, in his lecture on the subject, being—“If a three-year-old colt were constantly to be brought here—to the Veterinary College—to be shod, I feel convinced *he would never have his feet become contracted.*”

In getting rid of contraction, however, Coleman did not, nor did any body else, nor was any one likely to, foresee what was to happen. That was left for Mr. Turner to discover—or, at all events, to make known. And the circumstance, now explained—though not, that I am aware of, explained before—of navicularthrititis being an uncommon disease so long as contraction was a common one, but becoming comparatively frequent the moment contraction was put all but an end to, accounts for Coleman viewing the solitary preparation in the Museum at the Veterinary College as a specimen of “*rare disease*,” as well as for the unlikelihood there consequently was of navicularthrititis being discovered in days when the dissection of morbid parts was pursued with nothing like the diligence which has marked its prosecution in later times.

Is pressure to the frog, then, a cause of navicularthrititis?—Not an immediate, but a *predisponent* cause. A foot with a sound

and prominent frog is *in a condition* to receive the disease, while one with a shrunk, shrivelled, and especially a diseased frog, enjoys a sort of immunity from taking it—is, in fact, comparatively, insusceptible of navicularthrititis.

DEATH OF A FILLY CAUSED BY AN ENORMOUS TUMOUR GROWING IN HER BELLY.

Case sent by Mr. SIMMONS, Thame.

A MARE, two years old, the property of Mr. King, of Crendoz, Bucks, was observed to be very uneasy on Thursday last, when the smith of the village was sent for, who gave what he called “a fever-ball and clyster,” and bled the mare. She not being relieved, I was sent for the evening of the same day. I found the mare with a pulse about 70; the artery being so tense that it was difficult to feel the pulsation. They could give no account of any dung having been passed for a day or two. There existed violent palpitation of the heart, so much so, that it might be heard outside the stable. She kept in continual motion, often lying down and quickly rising again, but not in the hurried manner of a horse with colic; in fact, she seemed in but little pain, though she at times pawed up the litter and hung down her head, with her eyes almost closed, like a horse with staggers. Her breathing was very laborious.

In the first place I bled her, and administered ol. lini, aloës, and sp. æth. nit., and clystered her. From this she appeared for a time relieved; but not the least portion of dung came away with the clyster fluid. In an hour the same uneasiness re-appeared, but without the laborious breathing or palpitation; the pulse still being at 70, and remaining about the same the whole of the night. The next day, however, the pulsations at the heart became very feeble; in fact, it appeared an irregular fluttering pulsation at the side. I administered more aloes and oil, and repeated the clysters every four hours, the water returning in every case without the least portion of dung.

She appeared to be getting much weaker, but still exhibited no acute pain.

In the night she dropped down, and died without a struggle.

On opening her, the first thing to be seen was an immense solid mass of a cancerous appearance, weighing twenty-six pounds and a half, growing between the bowels, occupying the situation

of the mesentery. The whole of the bowels appeared perfectly healthy, excepting about a foot, which was twisted, in consequence of the enlargement above alluded to; the tumour having become entangled with that part of the bowels, so as to prevent the possibility of any thing passing.

The singularity of this case, and the reason I trouble you with it, is the extraordinary size and appearance of the enlargement, for which I am at a loss for a name; although, in my opinion, it may be cancerous. I have, however, reserved a portion of it, which I beg to submit for your examination. Should you consider the case worthy a place in your journal, I shall feel great pleasure in reading your remarks upon it.

*** The portion of the tumour kindly sent us by Mr. Simmons for examination exhibits all the callosity and uniform whiteness of scirrhus. And, though it is wanting in the arboriform distribution of its veins, which is said to be denotive of *carcinoma*, or cancer, yet is it amply furnished with bloodvessels, and with large ones too. And so truly lardaceous in appearance are some parts of its interior, that we were tempted—by way of further test—to boil a piece of it: as was anticipated, however, not a particle of fat or oil was extractible from it. Its general texture appears to be *fibro-cartilaginous*. Under the knife it evinces a leathery toughness and indurated smoothness; in places feeling fibrous or grating to the cut. We feel disposed to agree in opinion with Mr. Simmons, and regard the tumour as *carcinomatous*, or cancerous in its nature; and what strengthens this opinion is, the presence of a cyst in its interior, about the size of a small marble, containing a soft, cheese-like, dingy yellow-looking matter, indicating imperfect or unhealthy suppuration and abscess, evidently the commencement of something very similar to that which is known as the *cancerous degeneration*. And were we, from the isolated portion sent us, to venture an opinion respecting its origin, we should say it took its rise in disease of the mesentric glands.—ED. VET.

CASE OF ENORMOUS TUMOUR CAUSING SEMBLANCE OF PREGNANCY.

By A. B. HENDERSON, M.R.C.V.S., London.

THE following singular case of pseudo-pregnancy, from the appearances which it assumed and the symptoms it gave rise to, semblant of those of utero-gestation, seeming to me to possess a

value as well illustrative of the abstract disease as demonstrative of the importance of attending, in all cases in which any doubt may arise, to the minutiae of diagnosis, I have sent it for insertion.

June 16th, 1846.—I was called in to attend a bay mare, middle aged, tolerably well bred, who had been used as a hunter and hack. The mare was believed to be in foal, and was thought to have gone over her time. On this latter point, however, there was much reason to doubt, as no correct information could be obtained as to the period when last she went to the horse.

The reason why I was called in was from the mare being attacked with influenza. I found the mucous membranes of a yellow tinge and highly injected—pulse rather quick, but weak—dulness about the eyes—respiration tranquil—appetite moderate—and the condition very low. The abdomen was greatly distended, especially at the lower part, the right side being rather the most prominent.

My opinion being asked as to the fact of the mare being with foal, I proceeded to make a careful examination by introducing my hand per rectum. With considerable difficulty I could feel a large circumscribed tumour so situate that I believed it to be a *gravid uterus*. The labia pudendi, however, did not shew any relaxation or tendency to relax, neither did the mammæ shew any fullness, nor the contiguous superficial bloodvessels evince any of that engorgement so generally to be observed previous to these organs taking on the functions of secretion. It was perfectly evident that there was disorder of the mucous membranes, also that there existed a low febrile state of the system, and for this I prescribed accordingly; but from the very contradictory symptoms which manifested themselves I could by no means make up my mind to give any positive opinion on the question of her being with foal. Believing, however, in my own mind that there was a foal, though in some very weakly condition, or perhaps dead, under these circumstances I advised the proprietor to seek another opinion; and accordingly, on the 22d of June, Mr. Arthur Cherry made an examination of the case with me.

Meanwhile, the general health had improved, the attack of influenza subsiding under the treatment adopted. The labia pudendi and mammæ had not altered their appearance, although the abdomen had rather increased in size. A more minute examination was instituted. Auscultation at the flank did not indicate the “bruit” of foetal action, except that there was occasionally to be detected a low indistinct murmur, evidently not referrible to any of the abdominal viscera. The examination per rectum proved that there was a large circumscribed tumour occupying the situation of a gravid uterus, rather inclining to the right side, giving to the touch a simi-

lar sensation to that of the impregnated womb. When the points of the fingers were steadily pressed upon the parietes of this supposed gravid uterus, there was an evident though weak pulsation to be felt, and synchronous with the sound heard through auscultation.

Examination per vaginam proved that there was no disease of the vagina or uterus, or cervix uteri: both these latter were indeed small, evincing no symptoms of relaxation.

The body of the uterus could not be felt; it appeared as though it merged in the tumour immediately in front of it. There was, and had been from the first, an extraordinary degree of flatulence, which kept the intestines in constant motion, accompanied by a loud rumbling noise; both of which circumstances added very considerable difficulties to the examination.

After a long and careful examination, Mr. Arthur Cherry came to the conclusion that he had every reason to believe the uterus was impregnated, had even passed the full period of utero gestation, but that the foal was either possessed of exceedingly feeble powers of life, or was actually dead; that it was evident little or nothing could be done to benefit the general health; the case must be left to its natural development.

August 9th.—Mr. Cherry and myself made another examination. The external appearance seemed to us strikingly like a mare in foal with twins. The general health had now become re-established; the appetite was good, the pulse normal; the eye and skin looking bright and lively. The labia were relaxed and tumid; there was also a falling in over the sacro-ischiatic ligaments: the mammæ remained unaltered. The examination per rectum gave similar results to those before described, but that per vaginam shewed a marked difference. The os uteri was now relaxed so that the fingers could be readily passed within it, and the tumour had become elevated towards the brim of the pelvis. General health and appearance continuing good,—to be kept quiet in a loose box, having a yard attached to it, and carefully to be attended to and watched.

The mare was frequently seen after this. No great change however occurred, unless that the abdomen became rather increased in size.

September 5th.—I was sent for in great haste, the mare having fallen down, and not being able to raise herself again, manifesting great uneasiness. All hopes, indeed, of a successful issue being evidently at an end, it was thought she had better be destroyed, which on the 6th was done, and soon after a *post-mortem* examination was instituted.

Autopsy eight Hours after Death.

An incision being made in the direction of the linea alba, no sooner were the parietes of the abdomen cut through, than a large quantity of serum escaped. The intestines manifested no diseased appearance, either in themselves, or the peritoneum covering them, neither did the reflected portion of the membrane shew any. As, however, the intestines separated, a large mass of rather dark colour, in size and shape, bearing a very close resemblance to a gravid uterus, presented itself. Its dark colour appeared to be owing to inflammation, as though caused by the presence of a dead fœtus. Even the outward touch communicated to the hand this impression.

Likewise, the situation in the abdomen was precisely that of the impregnated womb. The tumour reached from the brim of the pelvis forwards towards the diaphragm, the anterior portion dipping down towards the umbilicus. Nor did there, at this stage of the examination, seem to exist any other connexions save those belonging to the uterus. The whole contents of the abdomen were now removed in the usual way.

The intestines were carefully dissected from around the tumid mass; through which, now insulated, a longitudinal incision was made, when the nature of this so long doubtful affair began to develope itself. The external covering proved to be peritoneum; beneath which was a layer, about half an inch thick, of delicate cellular tissue, infiltrated with gelatinous serum, and tinged with venous blood. Cutting deeper, the mass was found composed of a number of large and small cells, disposed in lobes firmly held together, which were filled variously, some with laminated fibrine, some with grumous blood, others with both matters in combination. One lobe, rather smaller than the others, was composed of several small cells, partly cartilaginous, and filled with bright yellow coagulated serum. In another, of similar character, the cartilaginous portions had become osseous. There was no appearance of aneurismal sac, nor did there seem to be any vessel having a direct opening into any of the cells: it seemed as though there had been a gradual oozing out from the minute vessels. The entire mass was made up of these various lobes and their cells.

The question next to decide was, the organ that was the seat of such extensive disease. Was it the ovary? cornu uteri? the body of the uterus?—or what was it? Here, at first, seemed a great difficulty. At last, after a close search, we found both ovaries, the cornu and body of the uterus, all which parts were

so closely adherent to the superficies of the tumour, so embedded in its tunics, or in the spaces left between the junctions of the lobes at the posterior part, that without close inspection they must have been entirely passed over. Both ovaries were diseased. The right one was half as large again as natural, and possessed a scirrhous hardness, with an evident tendency to ossific deposit. In it was a corpus luteum, enlarged and converted into a yellow viscid serous body; the left was indurated; the uterus was small and flabby, but not diseased.

It became my object to ascertain the attachments of this large mass. This proved to be *without* the peritoneum, beneath the lumbar vertebræ, extending towards the last dorsal. It appeared to have its origin in the posterior mesenteric glands. There was, however, so complete a change in character, that all appearance of their original structure, or even shape, was lost. It was supported partly by bands of condensed cellular membrane, partly by the peritoneum, reposing upon the parietes of the abdomen, to which it had considerable extent of attachment. The weight of the tumour was one cwt. and a half.

Having mentioned to Mr. Cherry that I intended to send for publication in *THE VETERINARIAN* a statement of this curious case, he told me that he should have some remarks to make on so rare a disease, which I doubt not that gentleman will take an early opportunity of doing.

Park-lane, February 8, 1847.

ON WOUNDED AND DIVIDED TENDONS,

WITH THEIR SHEATHS; ALSO, LESIONS OF ELASTIC LIGAMENTS OF THE LEGS OF HUNTERS INFLICTED BY SURREY FLINTS.

By THOMAS TURNER,

President of the Royal College of Veterinary Surgeons.

Dear Mr. Editor,

I FEEL anxious to record in your invaluable Periodical a brief sketch of some of my experience in a very important branch of veterinary practice, which has been but seldom adverted to by your numerous correspondents.

I take up my pen solely for the guidance of the junior practitioner: it is essentially necessary that he be put on his guard (particularly on his commencing practice in a hunting district) respecting this division of veterinary surgery. It will be found

upon investigation in all its bearings, that although there is no portion shrouded in any mystery, yet the *aspect* of the case is sometimes at the commencement very insidious, oftentimes during its *progress* perplexing in the extreme, even to the experienced practitioner familiar with these casualties, occasionally trying to the veteran's qualifications as to skill and firmness of purpose combined : a prompt decision being expected of him by the owner of a cut down 200 guinea hunter, on the very scene of action ; *then* and *there* to declare the prospect of *cure*, or to order a pistol to the head of the gallant steed.

Of such frequent occurrence are these accidents in the hunting field, more particularly in the sporting district in which it has been my lot to reside. Being a native, I well remember from boy-hood a hunting season has never passed without furnishing its quota of such cases as to call forth the utmost skill of the experienced veterinarian ; and I shall have the gratification of shewing my young friends the striking effects of wear and tear peculiar to the county of Surrey, having myself both hunted and travelled in other districts where similar accidents are comparatively unknown, as proved from repeated conversations with the different veterinarians in the several localities where I might have been staying. The hills in Surrey abound, proverbially so, and some of them are almost perpendicular ; but the general character of the country is arable, ridge and furrow, with very little pasture ; and during a long continuance of wet weather it rides remarkably heavy, requiring the legs of our hunters to be short-jointed, stout and true in all their proportions ; in short, the high-prized best leg is only just good enough—an animal possessing such formation being usually exempt from the casualties to which my paper alludes. The condition of ground peculiarly liable to favour the production of the most formidable of these injuries is generally at the breaking up of a long frost, in a short fast run, and when, perhaps, the hunter is over fresh, somewhat eager, and not exactly under the command of that accomplished hand which should invariably steer him during the chace, and proves so advantageous to him in his many trying encounters.

The description of horse most susceptible of being wounded is the sixteen hands thorough-bred, with an undue length of metacarpal and pastern bones, small fetlock joints, presenting too great an obliquity, admitting the tuft of hair at the posterior part nearly coming in contact with the ground at every stride ; carrying at the same time, perhaps, a stone or two more weight than he is quite master of. We will suppose such an animal as I have described, at the very top of condition, mounted by his owner or servant at a meet with *stag* hounds, in the immediate vicinity of

a range of hills very steep, soil chalk, gravel, or loose shingle, and the first hunting appointment after a long frost. The run commences most impetuously, the tall nag descends the first hill somewhat in a side direction, which is strewn here and there with broken flints of an angular shape, keenly sharp as a knife; one of these just under the ground's surface, and when the fore leg of the blood horse is at its utmost extension, under the superincumbent weight of the rider, at this unlucky moment comes in immediate contact with the centre of the heel (precisely below the tuft of hair which, as we all know in blood horses hardly amounts to a protection) in one instant completely severs the theca and flexor perforans tendon itself; the toe of the foot is raised in the air, and the animal walks for a second or two upon the posterior part of the fetlock joint instead of the hoof. The consternation of the rider at this critical moment is beyond my feeble pen to depict; but, as a matter of course, the veterinarian is in most anxious request. Upon examination, the unfortunate animal may prove ruined as for ever afterwards becoming a highly prized hunter; yet the external wound through the common integuments may occupy a space of only little more than half an inch in length; but, as will be seen as I proceed further in my history, there is more mischief than appears on the surface. Most marked evidence of the probable unsuccessful issue of the case quickly supervenes—in less than half an hour from the receipt of the injury considerable swelling ensues up the leg, extending nearly to the back of the knee, and which to a practitioner unaccustomed to the like casualty would be deemed the ordinary inflammatory tumefaction attendant upon an injury of such a nature, when in reality it is the retraction of the powerful flexor muscle appended to the divided perforans tendon, which has, during the very short period, been acting vigorously, and literally drawn up the divided perforans from its opposite portion to the space, at least, of three inches; and, consequently, it is the relaxed sinew which is included in the general thickening or tumefied condition of limb, before there can have been time for inflammation*.

It is quite fresh in my recollection of two parallel instances of the foregoing occurring in one day's run with stag hounds, right and left of me, and at the same instant of time, descending a moderate hill at a very fast pace. Two remarkably fine well-bred horses, one ridden by a gentleman weighing fifteen stone, the other ridden by a gentleman of only nine stone; both horses were

* My brother and self have of late years encased the wounded limb in an iron cradle, for the better approximation of the divided sinew.

ruined as hunters, and ended their days in harness, never again being able to take the field.

I shall for the present leave the cases of thorough division of the flexor tendon, to advert to *lesions* of either branch of the suspensory ligament. The seat of this injury is generally four or five inches higher up the leg, approaching the outer or inner ancle. In such a case the external wound is larger and broader, the continuation of the suspensory ligament branching off at the inner or outer ancle being involved in the mischief, including, perhaps, a lesion of the theca, and even the flexor perforatus wounded, but not a division of it, the animal almost immediately evincing most acute pain, completely swinging the leg off the ground for a few seconds, and when urged on to the first convenient situation for his accommodation, can only lodge his toe upon the ground. Truly formidable as the nature of this injury appears at the outset, the patient eventually *does well*. His recovery usually occupies many months, frequently reflects great credit upon the medical attendant, and very deservedly, for he experiences anxious hours enough during its various stages, warding off the constitutional disturbance arising from excessive pain, often approaching

Tetanus combined with pretty free escape of synovia.— I have found that success generally attends our endeavours when the wound inflicted happens to be *above* the fetlock joint, many instances having occurred during my practice in which the flexor perforatus has been severed in the way before described immediately above the bulge or posterior part of the fetlock joint; and when timely veterinary aid has been employed, with a due regard to the position of the limb, by causing the ends of the divided tendon as speedily as possible to approximate, highly favorable has been the result, and the hunter again restored to his former usefulness; although not without much pain and considerable lameness existing during a tedious curative process, but with no inclination of the toe of the foot to elevate, owing to the situation of the wound. Great outrages, I feel persuaded, may be inflicted upon the *short flexor*, but not so with the *long flexor in the heel*, as a division there I have invariably seen accompanied by an immediate elevation of the toe.

All the foregoing remarks relate to the *fore leg*: they apply equally to the hinder limb, but it is less frequently *cut down*. An interesting case has occurred to me of a very handsome thoroughbred five-years-old mare, the property of a German sportsman.

On the first occasion of her being shewn to hounds, and supposed by him to be ruined in consequence of one of these sharp flints coming in contact with the extensor tendon of the hind leg,

midway between the fetlock joint and bend of the hock, which was perfectly divided, and the animal walked upon her leg, having lost the proper control over the foot. Fortunately for the owner, the accident occurred a short distance from his own residence, in Kent. I attended the case. The external wound being small, the skin was brought closely together, and healed by the first intention; the leg, generally, was also encased with pasteboard in mucilage, which in twenty-four hours after its application became a solid compress, aided by many yards of bandaging. I likewise kept the patient tied up by two halter reins to the rack for one month, without her being allowed to lie down or move out of the stall. The result was a perfect cure, without leaving a shade of lameness, or apparent elongation, or undue obliquity of limb; and the German sportsman eventually sold the mare to a foreign nobleman for 150 guineas.

I consider that compelling my patient to remain in the standing position so long proved a great auxiliary in her recovery, by causing the divided ends of the extensor tendon to be almost in perpetual approximation, her weight being very generally borne upon the injured limb, but which could not have been so readily accomplished had the injury inflicted been a divided *flexor* instead of a divided extensor; and here it is also proper for me to notice, that neither my compress or bandages were once removed after the first application, until the expiration of three months, when the cure appeared to have been perfected.

I am confident that the more mechanical are our devices which may be brought to bear in the multiplicity of these cases, the better; and the same will also apply to open joints, consistent with sound principles of surgery. In adopting means whereby pain is subdued, and the limb timely supported, indications of improvement will often be manifested to the inexpressible delight of a zealous practitioner, and the owner of a valuable hunter greatly cheered by the ultimate prospect of success.

This is a stage when science gains a triumphant ascendancy over the vulgar doings of the empiric, and the *modus curandi* becomes the topic of conversation among the scientific friends of our employers, to the no small credit of the veterinarian; while the advocates of the old hot oils plan of treatment, if any should there be in the discussion, are usually put to silence by our medical friends of the sister sciences with an energy becoming their high character and position in society.

[To be continued.]

Croydon,
March 15th, 1847.

CASE OF AMPUTATION OF THE LEG OF A COW UNDER THE INFLUENCE OF ÆTHER.

By ROBERT DOBSON, *V.S., Tranent, Haddingtonshire.*

ON the 3d of February, 1847, being requested by the inspector of the Farmers' and Graziers' Cattle Mutual Insurance Association to examine a cow belonging to a farmer in this village, I accordingly went, and found the animal labouring under a high degree of symptomatic fever from disease of the hock joint, and much emaciated in body.

PREVIOUS HISTORY OF THE CASE.—Three weeks before I was called in, the cow was in good condition. On her turning lame, there was an empiric requested to attend, who blistered the lame part, and the cow got rapidly worse; when I was consulted. I ordered cold water to be applied to the same part every two hours, and fever medicine to be given. This treatment was continued for eight days, with no beneficial result. Finding the cow fast sinking, I pronounced to Mr. Girdwood, the agent and inspector of the aforesaid Company, the incurable nature of the disease.

INHALING APPARATUS.—I called on Mr. Kemp, philosophical instrument maker, Edinburgh, and ordered an æther inhaling apparatus upon the same principle as is used by surgeons, only a tube leading from the main tube with a branch to each nostril.

OPERATION.—On the 15th February, 1847, in presence of several medical gentlemen and Mr. Girdwood, I proceeded to administer the æther to the animal. It was seventeen minutes before the patient was fully under its influence. The operation was then performed, with the assistance of Mr. Elam, V.S., from Edinburgh. No symptom of pain was evinced by the animal during the operation until we were drawing the integuments together, which was caused by not having a proper supply of æther (the quantity used was only four ounces), and consequently by its influence being lost before the operation was completed. Little more than an ounce of blood was lost during the operation.

AFTER TREATMENT.—The cow was put into slings, and kept there for ten days. Cold water was applied to the part every hour for the first two days, and fever medicine was given. She is getting into good condition; rising and lying down without assistance.

PATHOLOGICAL APPEARANCE.—There was coagulated pus within the capsular ligament of the hock joint, caries of the bones, ulceration of the cartilages, &c.

* * Will Mr. Dobson kindly send us a description more in detail of the apparatus he appears to have used with such decided success?—ED. VET

REMARKS ON THE EFFECTS OF ÆTHER.

By ALEXANDER HENDERSON, *Veterinary Surgeon to the Queen Dowager*, and W. A. CHERRY, *M.R.C.V.S.*

THE new and important discovery of the effects of æther, when the vapour is inhaled in sufficient volume and of sufficient density to render the nervous system insusceptible, and maintain animal life under its influence for a considerable period without destroying the vital energy, seems now to be so well established, that to doubt the fact would be bordering on folly; but not so is the doubt as to the risks to be run in its administration or in its after-consequences.

It is not in any way for the purpose of impeding the progress of the discovery, or of bringing it into disuse or disfavour, that the remarks suggested by the following experiments are made; but for the purpose of warning others, and perhaps thereby guarding against the recurrence of untoward consequences.

We must own that the results of our observations have been peculiarly unfortunate, when we see published so many statements of such great success; and we must further admit, that our surprise is the greater after the statements which have been put forth by the Professors of the Veterinary College, of its perfect applicability and easiness of exhibition to any kind of animal: indeed, so light has any difficulty in its use been made to appear, that one of the Professors has publicly stated, that a common soap-dish filled with æther and held to the animal's nose was all that was required, and that the sensation was so delightful, that it was eagerly inhaled, and that, when sufficiently affected, the animal quietly laid down and submitted, without resistance, to whatever was requisite to be done: great indeed, we repeat, was our surprise at the results we have witnessed.

The time was taken, watch in hand, in each experiment.

EXPERIMENT I.—A medium-sized cart horse was put under the influence of the sulph. æther. After seven minutes' inhalation, the animal reeled, and was on the point of falling; but it appearing doubtful whether any more striking result would ensue, and the apparatus being too small, so that a considerable portion of atmospheric air was commingled with the æther, the whole was removed, and the animal recovered its usual state. The quantity of æther consumed was twelve ounces.

EXPERIMENT II.—A bay carriage horse, in high condition, and of gentle temperament, and without any apparent disease, was submitted to the vapour. After the apparatus was adjusted, ten

ounces of æther were put into the receiver. In two and a half minutes the animal fell, but not until he had turned about many times, partially falling and staggering up again, and throwing himself about most furiously, and at last falling with a crash, so as to induce fears that some mischief must ensue. The breathing was tremendously increased, and every muscle connected with respiration in intense action. The effect of the æther was kept up as well as could be managed; for in falling one of the receptacles was torn off, and the opening was obliged to be closed by the hand; but sufficient effect was produced for the animal to keep the limbs tolerably still for about half a minute, and upon being pricked with a sharp instrument, he did not shew any sign of sensation. Upon rising, he reeled and staggered about for a few minutes, and on this subsiding, the experiment did not appear to be attended with any bad effects.

EXPERIMENT III.—A black horse, of medium size, was put under the influence of the vapour. The apparatus (a new one) was, when adjusted, charged with twelve ounces of æther, which almost immediately produced a marked effect—heaving of the flanks, staring of the eyes, loud and labourious breathing, a constant shuffling as if about to fall, reeling, staggering, partially falling, and at last falling with violence: this occupied seven minutes. When down, a series of the most violent struggles commenced. It did not appear that the æther had the effect of stopping them, as the charged apparatus was not removed for three or four minutes after falling. The experiment lasted fifteen minutes, and the recovery, occupying about five minutes longer, was the same as in Experiment No. II.

In each of these three cases it was pretty clear that the apparatus was not sufficiently perfect to exclude atmospheric air; and it was presumed that the common air, being mixed with the ætherised vapour, produced these violent symptoms.

EXPERIMENT IV.—After an interval of forty-eight hours, the same animal as in the last instance was again put under the ætherial influence. The apparatus now employed was rendered as perfect as could be, to exclude atmospheric air.

No bad symptoms manifesting themselves on the animal being closely examined; the apparatus was adjusted, and carefully inspected to see that nothing that could in any way interfere with the success of the experiment existed. Being satisfied on this point, the receptacle was charged with ten ounces of æther. The same symptoms as before were evinced; but in one minute and a half the horse fell, as in the former instance, with violence. A good straw bed had been prepared, and guide ropes were attached to the head, in order to prevent the danger so much to be dreaded

from the violent plunging, and in falling down. These were of some use. As soon as down a few symptoms of violence were evinced. The air-valve was opened for about a minute, then closed, and the vapour was again inhaled. The labour of breathing became terrific, and so continued for about one minute and a half. There did not seem to be any sensitive feeling, when a sudden drawing up of the hind legs shewed that something was going on wrong, but of what nature we could not tell. The apparatus was removed: a few loud breathings followed—all became suddenly still, and life was extinct, within six minutes of the commencement of the experiment. This was at 10 A.M. The quantity of æther consumed was six ounces.

Three o'clock, P.M.—We attended the post-mortem examination, in the full expectation of finding some organic change in such of the principal organs of life as would be likely to be affected by so powerful an agent, and which, the powers of life being weakened by previous organic disease, would yield under extraordinary influences. Not so, however: every organ was remarkably healthy; the bowels were enormously distended with flatus. On opening the abdomen, a strong smell of æther was emitted, but not any could be detected within the stomach or bowels. The diaphragm was ruptured to the extent of at least a foot and a-half. The pericardium was found distended with blood, which in quantity must have been at least eight pounds. The lungs were turgid with black blood, and smelled very powerfully of the æther. The heart being uncovered, we minutely examined into the situation of the evident lesion, and found that an angular rent, full an inch in length, had occurred just immediately beyond the origin of the aorta, from the left ventricle and above the semilunar valves, and within that portion which is included in the pericardium, otherwise there would have been blood effused into the chest, which there was not. The part exhibiting the lesion is in the possession of Mr. Alex. Henderson, jun. M.R.C.V.S., of Park-lane, who will be happy to shew the same, should any one wish to examine it.

Remarks.—By these experiments two points of great importance have been proved: by the first three—that, unless some ready means of regulating the quantity of vapour and the rapidity with which it is inhaled be devised, it is not sufficiently under controul to be generally practised. There is in the application of a regulating power one serious obstacle to be overcome, and that is, the violence of the animal, rendering approach dangerous. The last experiment, though fatal in its result, is of the utmost value: it proves that pure vapour of æther cannot be inhaled without imminent risk; and though we have been informed, on good authority, that the apparatus was again tested on the same day, and produced its full effects in a minute and three quarters, yet it appears that it was not

entirely without risk ; for the apparatus was removed immediately after falling, and the effect lasted for some four minutes afterwards. It was stated that the pulse rose to 120 per minute.

The rupture of the diaphragm and of the aorta was, no doubt, the result of the violent action of the respiratory organs : in all probability, the diaphragm was the first, and the aorta gave way at the time the hind legs were suddenly drawn up.

We are of opinion that these lesions were not produced by the act of falling, but were the result of the powerfully excited respiration. Our next observations will be for the purpose of ascertaining to what extent the difficulties which we have related can be met or removed, the question being too important to be allowed to rest without the fullest inquiry.

Apologising for the unavoidable length to which this account has run,

We are, yours, &c.

REFLECTIONS ON CATTLE PATHOLOGY—ITS NEGLECTED STATE—ITS VALUE AS A SCIENCE TO THE COMMUNITY.

By W. ARTHUR CHERRY, *V.S.*

Errors like straws upon the surface flow :
He who would search for pearls must dive below.

DRYDEN.

IT seems that, at last, the feelings of stock-owners are aroused to the necessity for more accurate knowledge of the diseases to which the animals reared for the food of mankind are liable. It is true that this new movement is only one more to be added to the long list of similar attempts which have been more or less prominently made during the last century ; but hitherto every effort has but proved a desultory one, and, after a lingering existence, silently dropped into oblivion. But, alas ! for the present well-being of our stock-owners, a dire disease, the visitation of an all-seeing Divine Providence, doubtless for some inscrutable but wise end, has been raging with fearful violence over kingdoms and districts throughout a large portion of the globe. This calamity has at last aroused attention, and different indeed is now the cry to that which was made at the commencement of this dire malady. Some few reflective minds foresaw the probable results of that at the onset, which, thought lightly of by most, has so fully borne out the fears the thoughtful entertained. The bulk of men then laughed at such predictions, looked on the prognosti-

cators as the veriest visionaries ; and believed that "*Nature*," all powerful as she so often proves herself to be, overpowering every effort that the wilfulness, ignorance, and presumption of man can devise for her destruction, would again bear them through. It appeared that the more ignorant, the more brutal a man was found to be, the better estimation he had accorded to him on all points connected with the diseases of our domesticated animals ; but if a man who, previously fitted by study, reflection, knowledge of principles, extensive acquaintance with the laws of life in health or disease, made an attempt at amelioration, or held out the voice of warning, derision, inattention, nay often the expression of the supremest contempt, was the only reward which greeted him. This picture is unfortunately too faithful to truth ; and this persistence in a bad course now meets with its reward. Now, the cry throughout the length and breadth of the land is for assistance ; but from whence is it to come ?—Many have endeavoured to explain, but with the effect of rendering confusion more confounded. Still there is hope, still means of amelioration, means of warding off many of the ill consequences which otherwise must inevitably ensue, and, though now at a late hour, there is yet good to be done.

Owners of stock have to thank themselves for a very considerable portion of the losses which they encounter ; their blindness to their own interest, their penuriousness, the attempt at saving of a shilling and losing of a pound—the most extraordinary persistence in the opinion that the cowherd, the shepherd, the illiterate itinerant quack, who invariably springs from the lowest and most ignorant of the people, were the whole and sole depositories of a science, abstruse and as yet unexplored—that such as these could alone know, could alone treat all the maladies to which cattle are liable. How often has the gibe, the taunt, the insult, met me in my prosecution of the study of cattle pathology ; the sneer that a shepherd or cowherd *must* know better than I did, because he was always with his flock, or in the barton ;—in other words, the men who know how to pitch a fold, to cleanse a shed, to drive the flock or herd to water or to pasture—profoundly ignorant of the laws of life, of the structure, the mechanism of the animal frame—must (I suppose) from merely inhaling the effluvia emitted by the animals they attended, imbibe more knowledge than the man who, studying the subject as an anatomist, physiologist, pathologist, and coupled with all the knowledge of routine attendance which they felt so proud of—could attain by these loftier means, and thus throw light on points which were involved in obscurity or overlaid by ignorance, and reduce thereby to simple rules, to simple treatment, diseases hitherto fatal, because allowed from ignorance to revel in the system till all hope of restoration was passed.

Two strong attempts have been made to produce men fitted for the task of regenerating cattle pathology: both have proved failures. The first was aimed at by the Odiham Society, somewhere about the year 1790, which, after taking great pains to establish the now Royal Veterinary College, finally merged its interests into that institution. For fifty years, however, nothing was done in advancement of the department of cattle pathology;—rarely, indeed, was such a subject even named. Seven years ago another attempt was made. The Royal Agricultural Society of England munificently granted £200 per annum to the same Institution for the express purpose of studying and teaching this branch of veterinary medicine; but at the end of seven years that society find it requisite to inquire into the results arising from their munificent grant, their earnest wishes. So little has been done, so insignificant are the advances which have been made, that public notice is given by one of the Society's most active members, that it would be desirable to apply a portion of the sum hitherto granted in some other way, to obtain that which they had failed in obtaining through the Veterinary College.

Twice has a powerful effort been made to rouse an institution founded with the avowed object, and carried on with the open profession, of being the school in which all branches of the veterinary art are to be taught, arrogating to itself the whole honour, the whole end, and sole prerogative, of ruling over, teaching, and directing the veterinary profession. Can we wonder that our most influential stock-owners—and by their example all others—place no confidence in veterinary surgeons for a knowledge of the diseases or treatment of cattle, sheep, or pigs, when they have failed in eliciting from the school such a system as could teach even the elements of the art as applicable to these animals? This is the only excuse that can be brought forward in defence of the treatment to which those able and willing to do their utmost for amendments have personally experienced; and certainly it is almost an unanswerable position.

That which is past cannot be recalled; but if the agriculturists as a body will only support the veterinary surgeons in their efforts, they will find enough able and willing to carry out the subject to the fullest extent.

The only possible way to arrive at any useful practical end is to commence *de novo*. The elementary studies are, anatomy, physiology, and therapeutics; of the first, so much ought to be known of the muscular system as relates to joints, because luxations have at times to be reduced; the arterial and nervous system (especially the sympathetic, which is largely developed, as I shall have occasion to refer to hereafter), the thoracic and abdominal viscera, and the generative organs. A knowledge of phy-

siology is imperative. With regard to therapeutics, this will gradually establish itself, if only common attention be directed towards it.

But, above all things, that incubus which has settled down upon the whole subject of cattle pathology must be cast off;—I mean, the load of nostrums, false views, and the nameless host of rubbish, trash, which has been so long accumulating, springing from ignorance and folly. Let this be done, and read that book which never errs, and which is so open and legible that he who runs may read, if he be but so inclined, the great Book of Nature, and much that now appears to be wrapped in mystery, to be attended by difficulty if not impossibility, will become unfolded, and prove to be simple, easy of remedy, when referred to its real causes.—Never shall I forget the unexpected recognition of principles by an esteemed friend, now no more, who, on my merely expressing my convictions of what might be done for the better treatment of the diseases of sheep, generously placed the whole of his flock of some hundreds entirely at my controul, undertaking to personally superintend the carrying out of my wishes. After watching for two years the working of principle *versus* empiricism, he exclaimed, “Oh, that I had known such plain, simple methods of treatment, how greatly to my profit!—for not only have I saved one-third, as you calculated might be done, but at least two-thirds of those which would otherwise have perished have been saved!” This is a larger proportion than ought to be expected, but in his case perfectly true, because of the great pains which was taken to fully carry out the principles laid down; and this being in a greater degree than will be usually found practicable, so a proportion rather less will be found to be the rule.

To shew what value to the country would result from the diminution by a portion of the present amount of deaths, let us, for the sake of argument, suppose that there are 50,000,000 of sheep, 8,000,000 of cattle, and 12,000,000 of pigs; and take the losses at three per cent. Of sheep there would be lost 1,500,000; of cattle 240,000; of pigs 360,000: say that, upon an average, one-third might be saved, there would then be a gain to the country of 500,000 sheep, 80,000 cattle, and 100,000 pigs. Estimate the cattle at £7 per head, sheep at £1 per head, and pigs at £1; we shall then have saved on cattle, sheep, and pigs, a total of £1,020,000. Assuming that I have over-estimated the items, only take one-half throughout, and we then have *five hundred and ten thousand pounds* saved to the community, and at an expense, compared with the result, of the greatest insignificance. All my accounts of numbers are far below what has been stated by others in published tables.

[To be continued.]

Extracts, Veterinary and Medical, from Domestic and Foreign Journals, &c.

ON THE CAUSES OF GLANDERS IN CAVALRY HORSES.

By M. ROBERT, *First Veterinary Surgeon to the Fifth Regiment of Artillery at la Fère (Aisne).*

IF hitherto the various modes of treatment employed as remedies against glanders have proved inefficient, it is because the actual causes to which the ravages of this disease are attributable have not yet been accurately determined; they have long been misapprehended, and still continue to be so. Many persons are impressed with the belief that bad stables and contagion have most to do with the development of the disease.

We see by the periodical journals, that the opinions of our brethren in the army, as well as those of other persons whose attention is devoted to the horse, are by no means unanimous as to what are the causes of glanders. Some attribute it to the bad quality of the food; others to badly managed stables—to the air in them being vitiated, and to the temperature being too high; while others, again, consider it to arise from the horses being worked too young, and, in some, from an innately bad constitution.

Without attempting to deny the greater or less influence which most of these causes may have on the development of disease, and especially of glanders, I believe their action to be very secondary, and that the primary cause, and in the army the principal one, lies in *sudden suppression of perspiration*.

As it is my wish that the importance of this cause should be properly estimated, I shall endeavour to reply to those who have adduced others. To the partisans of contagion, I reply, that, even admitting the contagiousness of glanders, so great are the precautionary measures adopted in the army, that, where this disease appears, its development is certainly attributable to any other cause rather than that of contagion. Sanatory visits are paid to all the stables every week: as soon as a horse becomes glandered it is separated from the others, placed in a different stable, and cleaned and tended by men kept expressly for that purpose. Besides, we do not admit the contagiousness of glanders where a horse has simply enlarged glands, and does not run at the nose.

To those who attribute the evil to bad fodder, we reply that this cause is not applicable to the army; for all the regiments have it in their power to give their horses good passable provender, if not

the very best, as good as that on which the farmers keep their own horses without these latter becoming glandered. We must also state, that a bad course of feeding must be persisted in for a considerable period before it can deteriorate the constitution of a horse and bring on glanders. Before the evil has proceeded to this length, the prejudicial quality of the fodder generally becomes manifest in the digestive organs, which are the first to suffer from the irritation occasioned by it, gastro-enteritis being produced: such affections, however, are rarely met with in regiments.

To those who attribute the evil to badly-managed stables, to the vitiated air engendered in them, to the temperature being too high, and to their being badly littered, &c., I reply, that barrack-stabling has lately been very much improved, and yet the ravages occasioned in regiments by glanders continue to be as extensive as ever. Out of the army, and especially among farmers, whose stables are invariably bad, glanders is but little known. Thus, in the four departments of Lorraine, where horses of every breed and district are to be found, and where such animals are badly fed, seldom cleaned, over-worked for nine months of the year, and shut up in low, hot, close stables for the remaining three, without light, with scarcely sufficient air to breathe, without exercise, and with the dung left to accumulate for eight days at a time, the horses are seldom ill, and still more seldom attacked with glanders.

In the department of the Moselle, where I practised for six years, the number of horses which died of glanders was but three in every thousand, per annum.

To those who seek for the cause of glanders in premature work, we reply, that most farm-horses are worked at two years and a half old. Regular, moderate work is always favourable to growth: if it is overdone it causes the horse to lose flesh, but does not dispose him to contract glanders, provided that all sudden suppression of perspiration is carefully avoided. Besides, regimental horses are never worked too early; they are seldom used until five years old, and then only moderately and properly worked.

Lastly, without attempting to deny that defective constitutions and a want of judgment in the selection of cavalry horses predisposes them for glanders, we reply, that the validity of this cause would be greater if it were only horses of a feeble constitution which perished; but, unfortunately, it is not so; it is in general the finest, the most spirited, and most vigorous horses, those which work best and exert themselves most, which fall victims to glanders.

We have already stated that, apart from the army, and in the badly managed stables of farmers and other horse-keepers, glanders

is but little known*, while in the French army, where the animals are well fed, carefully cleaned, for the most part moderately worked, and (since the stables have been improved and remodelled) well lodged; in fine, where they receive the full benefit of hygienic care, glanders commits the greatest ravages.

We can only, therefore, attribute the cause of this to the suppression of perspiration. In the French army, various circumstances may be seen occurring every day, liable to have an injurious effect on the functions of the skin. At the head of these we place the long dressings out of doors, and especially of a morning, when the air is cold and damp, and the horse has passed the night in a stable the temperature of which is high; there is also too great a desire frequently to renew the air of stables by the opening of doors and windows, and the establishment of currents of fresh air. Ill-managed farm-stables, where the temperature is generally very high, proves that heat is more conducive to the conservation of the health of horses than the ammoniacal gas and carbonic acid evolved is fruitful in engendering disease.

Let us not, therefore, seek for the cause of the prevalence of glanders in the army elsewhere than in derangement of the functions of the skin.

I will endeavour to explain the sympathy existing between the skin and the mucous membranes. These latter constantly secrete a mucus which lubricates them. In a state of health the secretions offer nothing worthy of observation; but if the cutaneous perspiration be arrested or diminished, the secretions become more abundant: the cause which increases them continuing, they degenerate into chronic catarrh, constituting a pathological state, which is neither more nor less than glanders.

Hence we see that the cutaneous perspiration being deranged, nature transports to other parts of the system the matter which these secretions are intended as emunctories to throw off. It will doubtless be objected, that the urinary secretion comes to the assistance of impeded perspiration, and that Nature avails herself of this eliminatory passage to reject all injurious matters. To this I reply, that although, in point of fact, the urine is more abundant under such circumstances, yet this secretion cannot wholly supply the place of the suppressed perspiration. In the case now under our notice, the equilibrium generally destroys itself by throwing the attack on the pituitary, or occasionally on the lungs or the pleura, from which species of metastasis results *glanders*, *pneu-*

* Excepting in some of the large hackney-coach and posting establishments at Paris, where the horses stand in the cold after having become heated, and being in a state of perspiration, and are thus, in this latter point of view, placed in the same category with some troop-horses.

monia, and *pleuritis*, this latter frequently terminating in hydrothorax.

All army veterinary surgeons will admit that it is these three diseases which carry off the greater proportion of cavalry horses.

We repeat it again, because we are convinced of the fact, that everything which diminishes the cutaneous secretions increases the mucous glandular functions, indeed those of the whole lymphatic system. In consequence of the suppression of the cutaneous secretions, arise alterations of the blood, lesions of the tissues, phthisis, glanders, and farcy. We will also add, that cutaneous perspiration is a purifying secretion, and one that it is most important not to suppress. Besides, if we come to reflect how much the skin of troop horses is impeded in the exercise of its functions by the dressings in the open air, by the currents and draughts through the stables, &c., we shall easily conceive how much these diseases owe their origin to the suppression of this excretion.

No one will deny that the garrison of La Fère has long been noted as being one of the worst of all our military stations as regards its bad stables, its damp atmosphere, and its sudden variations of temperature. All the regiments which come here have lost a great number of horses from glanders, farcy, and diseases of the chest. The 4th regiment of artillery, which preceded us, lost a frightful number during the three years of its sojourn at la Fère. This regiment, attributing the cause of glanders to the want of sufficient pure respirable air, and to the development of ammoniacal gas and carbonic acid, caused numerous openings to be made in the stables, in order to create a constant change of air, and always had the horses cleaned out of doors. Believing themselves to be in the right way of prevention, they spared no pains to ensure the respiration of pure air, and at the same time did every thing likely to impede a proper exercise of the functions of the skin. And what was the result? a frightful mortality among the horses of the regiment during its sojourn at la Fère.

Having been convinced for these ten years past that the causes of glanders lay in derangements of the functions of the skin, I was happy to leave Metz, where we had good stabling, but where the horses were always dressed out of doors, and where we lost a great number from glanders. I was glad, I say, to come to a garrison celebrated as being unhealthy, in order to convince the colonel and the officers that the causes of glanders lay in derangement of the functions of the skin. A new hygienic system proposed by me was adopted; I guaranteed its beneficial effects beforehand, and the results of three years' experience has confirmed my prediction. We proceeded on a totally opposite system to that of the regiment which had preceded us. From the period of our arrival at la

Fère, the horses were cleaned in the stable all the year round; they were watered from buckets containing barley meal, all currents of air were avoided by closing every door and window on one side when the weather was hot, and on both when it was wet and cold; the horses had on body-clothes when taken to the forge to be shod or cleaned, whatever might be the time of year; the wisp used for cleaning was never wetted; the horses were rubbed down on coming in from exercise, unsaddled, and then clothed.

Green meat and mashes are injurious in many cases, especially to horses of a lymphatic temperament. The atmosphere of la Fère and its environs is generally moist, predisposing to relaxation of the organs; we therefore suppressed these two substitutions, and throughout the year the regimental horses had a whole ration of oats. The consequence has been, that they have enjoyed ever since our residence at la Fère a most satisfactory state of health.

It is by pursuing this course of hygienic treatment that in the year 1844 this regiment obtained the first place among the fourteen artillery regiments and the six squadrons of waggon train as having lost the fewest horses; and that, too, at a garrison where all the preceding regiments had lost so many.

After what has been stated, there can be no danger in drawing the inference, that too much reliance has been placed upon the improved arrangement of cavalry stables as a prevention against glanders. The altered construction of stables, which admits of the horses being kept separate, of giving them more room, of making them eat their oats separately, is productive of the best results in those regiments where the hygienic treatment is otherwise good; but I am convinced that the full benefit of all these ameliorations will never be experienced until a ministerial order is issued to cause the cavalry to clean their horses *in doors* all the year round.

In support of what I have advanced, I must state that the garrisons of Thionville, Luxembourg, Sarreguemines, Sarrebruck, Metz, and Sarrelouis, are almost upon an equality as regards hygienic conditions, climate, soil, and the quality of the fodder; nevertheless, the relative amounts of their annual losses from glanders are very different. Thus, the regiments stationed at Sarrebruck, Sarrelouis, and Luxembourg lose scarcely any horses from glanders; while those which are at Thionville, Metz, and Sarreguemines suffer greatly every year from the ravages of this disease.

Wishing to convince myself what could be the cause of so great a difference in the amount of loss sustained by regiments so similarly situated, I visited each of the first mentioned garrisons in October 1842, and was enabled to convince myself that the exercise was the most laborious in France, the fodder was not of the best quality, and that at Luxembourg, the regiment of Lancers

stationed there had horses very inferior to the ordinary cavalry horses ; but that all sudden suppression of perspiration was carefully avoided, the horses being cleaned in the stable all the year round, well watered and clothed, and the stables kept constantly shut. It is the same in the English and German cavalry, where glanders is a disease of rare occurrence, or only appearing under peculiar circumstances.

In summing up, I repeat—that in the French cavalry, *cold stables, currents of air passing through these stables, and cleaning the horses out of doors, are the true causes of glanders.*

In order to induce conviction of the truth of what I have advanced, it will only be necessary to clean the horses in their stables for one whole year, or even to make a comparative experiment in two regiments stationed in the same town, under the influence of similar conditions as regards work, exercise, stabling, and food. They should likewise be, as far as possible, horses of the same branch of the service, and in equally good condition. I am quite positive that the results would be in favour of that regiment where the horses were kept warm, and that the ravages of glanders would be greatest in the one that cleaned its horses *out of doors*. The losses would reach their greatest height, however, if the regiment fed some of its horses every year on green meat, and debilitated them by weekly rations of bran-mash. As a pupil of the school at Alfort, where I obtained the first prize, and received my appointment as veterinary surgeon in 1819, this is the first time, after twenty-six years' of practice, and being veterinary surgeon to the department of the Moselle for six years, that I have ventured to give publicity to my opinions relative to the causes of glanders. They are the results of close observation in both civil and military veterinary practice ; and of a careful study of numerous cases met with under different hygienic conditions and varied relative circumstances ; and it has not been until after having availed myself of every opportunity for many years past of conversing with my veterinary brethren on the causes of glanders, and especially with Messieurs Dehan, at Luneville, and Bournier, at Metz, two very talented ex-military veterinarians, whose opinions relative to glanders are in conformity with my own, that I have ventured to draw up this paper, which I now conclude by repeating, that glanders arises from derangements of the functions of the skin, *derangements which are most frequently occasioned by out-of-door cleanings.*

GLANDULAR ABSCESSSES.

NUMEROUS ABSCESSSES OF THE GLANDS AT THE ENTRANCE OF THE CHEST, OCCASIONED BY THE INSERTION OF A SETON IN THE BREAST, CONSECUTIVE ON ACUTE PLEURITIS—DEATH OF THE ANIMAL.

[Case minuted in the Clinique of the School at Alfort.]

Reported by M. DUQUESNE, Pupil.

VARIOUS accidents are liable to supervene upon the application of setons to different parts of the body of most of our domesticated animals; some so serious in their nature as to produce death. These latter are, however, now too well known for it to be necessary for us to revert specially to them, or present them afresh to the notice of practitioners. In fact, what can we say respecting those *hemorrhages* which are denominated *passive*, of those *gangrenous swellings*, which, under some circumstances, are seen accompanying and following the application of a seton, after the observations that have already been made on these subjects in the monthly journals, as well as in some of our veterinary works. But besides these consecutive accidents there are others, usually of a trifling nature, and on that account hitherto but little studied, which may, when occurring in certain parts of the body, induce the most serious and fatal consequences, as the following case will prove. A Hungarian horse, of a good constitution, adapted for draught, roan coloured, and five years old, belonging to M. Malice, of St. Maur les Fosses, was, on the 1st of last April, brought to the veterinary school at Alfort for advice, and left at the infirmary of that institution to be treated for acute pneumonia, distinctly characterised as situated in the inferior half of the left lobe of the lungs.

The usual course of treatment proper under such circumstances was immediately had recourse to, viz. external revulsives: two setons were inserted under the breast, and two more upon the left side of the chest. The treatment employed produced a rapid improvement in the state of the patient, so much so, that on the 15th instant he was returned to his owner in a fair way towards perfect convalescence.

Before he was discharged the four setons were successively withdrawn, since the whole of that portion of the lungs which had ceased to respire had again become permeable to air. The owner had also been advised to have the canals of the two setons in the

chest which had been withdrawn last, pressed every day, in order to prevent the formation of abscesses, which are so frequent by the pus collected within the canal of a seton not finding free egress. The animal was only to be lightly worked, and not for long at a time.

Notwithstanding all these precautions, the horse was brought back to the hospital on the 24th of the month, that is, eight days after he had been discharged, to be treated for a swelling of considerable size that had become developed within the last two days on the chest, over the course of the seton inserted on the right side.

This swelling rose anteriorly as high as the glands at the entrance of the chest, and extended posteriorly about to the girthing place. It formed a mechanical obstacle to walking, in that it impeded the freedom and extent of the movements of the limb under which it was situated. It was hot, and painful to the touch, and in some parts of its surface presented numerous small abscesses, evidently formed in the actual course of the seton. These multiplied purulent collections appeared to have been the nucleus round which the swelling had formed, which had commenced in the formation of a large lymphatic cord passing from one of the abscesses to the ganglions at the entrance of the chest.

It is by no means unusual to see swellings, sometimes of no inconsiderable size, follow upon the application of a seton under the chest: they almost invariably result from the inflammation of the surrounding cellular tissue, and rapidly diminish when suppuration is established. Consequently, there is no reason, in general, to be alarmed about them, unless the animal in which they exist is out of condition, that is to say, suffering from an impaired constitution, from poor or vitiated blood, or has been respiring an impure atmosphere. But where from these enlargements one or more enlarged lymphatics are seen proceeding to the glands at the entrance of the chest, the veterinarian ought, in whatever state he finds the animal, to endeavour by every means in his power to get rid of these cords as rapidly as possible, in order to prevent the formation of deeply seated abscesses in the glands; for abscesses in this part are but too likely to induce inflammation of the serous tissue which enters into the composition of the anterior mediastine, as we have already had occasion to observe: they may also open into the anterior of the thoracic cavity, and in both these cases bring on a more or less serious if not fatal attack of pleurisy.

The first thing in the present case, therefore, to be done was immediately to lay open the sinus left by the seton, both before and behind, and to open the small abscesses that had formed in the substance of the swelling; the lymphatic cord was then energetically rubbed with tincture of cantharides. No internal treatment was employed

on account of the integrity of the vital functions and the perfect state of health in which the animal appeared to be.

On the following day an orange-coloured serosity, in the form of drops, covered the whole extent of the tumour, which was considerably increased in size. So great was the tension of the skin over the surface of the tumour that numerous scarifications were made in it. On the 28th, the animal appeared dull—did not eat with its usual appetite—his respiration was accelerated, and there was an augmentation in the number of pulsations.

Again was the tumour examined, in order to ascertain that no purulent collection existed in the centre of it. We fancied that a slight fluctuation was perceptible, of deeply lodged matter; but it was not sufficiently distinct to warrant the use of the bistoury; besides, it was thought better to wait until the abscess was ripe.

On the 28th the swelling was again examined, and an abscess deeply situated on the right side of the entrance to the chest, a little below the cariniform process of the sternum, was clearly distinguishable. An œdema of some considerable size, such as is symptomatic of superficial or deeply-seated purulent collections, situated on declivitous parts of the body, occupied the right forearm. This œdema was neither hot nor painful; all the inconvenience occasioned was to render the forward motion of the limb more difficult.

On the morning of the 30th, the animal appeared to move with difficulty, and had not touched the rations given to it on the preceding evening. It was resolved to open the abscess above alluded to: accordingly, the edge of a straight bistoury was plunged to its whole length into the thickness of the swelling, and a considerable quantity of white creamy pus, undistinguished by any unpleasant smell, flowed from the incision thus made. An opening of considerable extent having permitted the introduction of the finger into the abscess, we were astonished to find only a small bag, the capacity of which appeared by no means equivalent to the quantity of pus which had been discharged; hence it was supposed that this abscess was not the only one, and must communicate with other and more deeply-seated purulent deposits.

On the following day the animal did not appear so dull; it could move the limb forward with greater ease, and the swelling on the chest was very considerably diminished; a great quantity of pus, however, continued to be discharged.

On the night between the 2d and 3d of May it was perceived that the animal had his halter extended to its utmost length, hung down his head, and had neither touched the hay nor oats which had been placed for him on the preceding evening. On a closer examination the following symptoms were recognized:—Partial

shiverings about the flank and body, coming on from time to time, the depression so great that he noticed nothing passing around him—the loins insensible—respiration accelerated—inspiration short—expiration jerking and trembling—pulse quick and hard—conjunctival membrane rather pale—mouth warm and clammy. On auscultating the chest, the respiratory murmur was audible throughout the whole extent of the cavity; it was, however, feeble towards the inferior portion, particularly at the right side: percussion also produced an echo throughout; but on the right side the animal invariably manifested a great degree of sensibility to any pressure exercised on the intercostal spaces, and endeavoured, by altering his position and moving his sides, to withdraw himself from the touch of the hand.

These symptoms, in conjunction with those which had been observed before, from the time of the formation of the abscess at the entrance of the chest, enabled us to disagnosticate acute pleuritis, consecutive, doubtless, on the inflammatory action of which the lymphatic glands which penetrate with the trachea into the thoracic cavity had been the seat.

A similar case had been seen some time previously in a horse in which two setons had been inserted under the chest as a remedy for inflammation of the principal respiratory passages and bronchi; there had also been in this animal much swelling around one seton, and an abscess had formed itself in front of the chest.

From the very commencement of this second affection the prognostic became very serious: how could it be otherwise? it being always so when pleurisy arises from general causes, such as chills, sudden arrest of perspiration, &c.

An energetic revulsive and antiphlogistic course of treatment was immediately put in force; six quarts of blood were taken from the jugular, and a large sinapism applied to the chest; strict attention to diet, and warm saccharine drinks.

At four o'clock all the symptoms I have described as indicative of the commencement of the disease were become much developed: on auscultation there was a manifest absence of all respiratory sound at the inferior part of the two sides of the chest; percussion produced only a dull sound, and the animal evidently suffered great pain during the examination. Three more quarts of blood were taken; the swelling induced by the sinapism was scarified; the cautery applied to these scarifications, and a mustard poultice again put on. The tumour on the chest had considerably diminished in size, and had become softer and less painful to the touch; a great quantity of pus, however, continued to be discharged through the opening of the abscess.

On the 5th the pleural effusion had made such progress that death appeared immediate.

The pulse was small and wiry; the respiration difficult, and even painful, and accompanied by a peculiar contorsive motion of the sides; a loud vascular sound was audible at the upper part of both lungs; and where this sound was less appreciable, another sound or rattle commenced, passing chiefly through the large bronchial divisions, and recognised, in treatises on auscultation, under the name of crepitous rale.

This sound, when it exists in pleurisy, announces that the pulmonary pleura has, at the bottom of the thoracic cavity, contracted some adhesions with the costal pleura; it also indicates the limits of the effusion. The animal could hardly stand, with its fore-legs set apart from each other, to facilitate the entrance of air into the lungs, tottering as it did beneath the weight of the body. Its face was distorted; the eye brilliant, the pupil dilated, the extremities cold; in a word, there was every sign of agony. He did not die until the following morning, some moments after he had fallen down upon his litter.

Post-mortem examination.—On opening the body, which was done shortly after death, numerous lesions were found, some appertaining to the primitive disease, that is to say, to the swelling of the seton, and others to a consecutive inflammation of the glands at the entrance of the chest and of the pleura.

The first, which were almost immediately subcutaneous, existed in the actual course of the seton, whence all the evil had arisen. There was found an indurated tissue giving out a grating sound under the knife, and displaying every here and there little lumps or swellings, constituting so many abscesses, isolated from one another, having thick coverings, and containing a yellow fibrous pus. On a level with the entrance to the chest was found a fistulous wound, through which, a few days before, had flowed the pus contained in the glandular abscess. The membrane which lined the interior of this abscess (pyogenic membrane) was covered with cellulo-vascular buds, the two largest of which had in their centres openings into a fistulous passage, which formed the communication between these abscesses and other and more deeply situated purulent deposits. These latter were surrounded on all sides by lymphatic glands, many of which had already begun to soften; while others, and by far the greater number, when cut open, only displayed a reddish-brown tissue, greatly inflamed, easily torn, and appearing, like the substance of the kidneys, to be radiated from the centre towards the circumference. The first mentioned, that is to say, those which presented several soft spots about the centre, communicated with each other by means of fistulous passages, which appeared to us to be neither more nor less than the lymphatic vessels which, in a natural state, pass from one of these glands to another.

On opening the chest, a considerable quantity of thick serous liquid flowed out, on which were floating large fibrino-albuminous flakes of a whitish yellow, soft, easily torn, and presenting no remaining traces of organization. Similar matter, but of longer formation, although still recent, was found upon the costal and pulmonary pleuræ; it had contracted an adherence, easily destroyed, but still of sufficient firmness to attach the lungs to the bottom of the thoracic cavity, and prevent them from floating in the fluid which filled the cavity.

Underneath these adventitious productions the serous membrane was strongly injected, and in some parts presented brown patches of greater or less size, actual ecchymosis, arising also from excess of inflammation. It was on the anterior mediastinum chiefly that the pleural inflammation appeared to have been most acute. This mediastinum caused a projection on that side on which an opening had been made into the thorax; so that one would almost have been led to believe that it yielded to the pressure from below upwards exercised by the fluid contained in the other part of the chest; but an incision of the bistoury into this prominence soon shewed that it was created by an enormous abscess which had become developed between the folds of the anterior mediastinum itself. The fluid which flowed from it was similar in nature and appearance to that contained in the abscess of which we have already spoken.

On attentively examining the interior of this fresh abscess, it was discovered that it communicated with the abscesses situated on the exterior of the chest by means of a very small sinus which passed along the internal surface of the first right side, and went to the glands thereabouts. Here the surrounding glands were found to be for the most part inflamed and softened, some of them being completely isolated from the neighbouring parts, and floating in pus.

The tissue of the lungs presented no pathological alteration, excepting that at its lower portion, on each side, their substance was condensed, of a reddish-brown hue, and without infiltration of the cellular partitions between the lobes. There can be no doubt but that this phenomenon was the result of prolonged emersion of this portion of the lobes in the pleural fluid. We have frequently had occasion to examine animals that have died of acute pleuritis, and have been enabled to study the difference which exists between the pulmonary tissue when thus condensed and that which has been acted upon by inflammation, and it is impossible to confound the two.

ON THE VALUE OF VACCINATION AND RE-VACCINATION.*

IN 1842 the Academy of Sciences offered a prize for the best treatise on the above subject. Thirty-five candidates responded to the call ; and the perusal of their labours has proved so laborious an undertaking, that it is only very lately that M. Serres has been able to present a report to the Academy in the name of the committee appointed to decide on the comparative merit of the essays. M. Serres' report is a remarkable document, and is also important, from its conclusions having been adopted by the Academy after mature deliberation. We extract the following data from this report :—

“ Vaccination preserves the human species from variola, but its preservative power is not absolute. Variola itself, either spontaneous or produced by inoculation, does not preserve absolutely from future attacks, therefore it is not extraordinary that vaccination should not. Thus, Mead mentions having seen three variolous eruptions take place successively on the same woman : the son of Forestus was twice attacked with variola ; and Dehaen states that one of his patients was attacked six times by variola with impunity, but died of a seventh invasion of the disease. Although, however, vaccination is *sometimes* powerless to preserve us from variola, it *always* diminishes the gravity of the latter malady. This property, which Jenner and his first successors did not even suspect, is thoroughly proved by the various facts which have been recently accumulated. In one of the most terrible epidemics of variola that has taken place in Europe since the discovery of vaccination,—that of Marseilles, in 1828,—more than ten thousand persons were attacked. Of these, two thousand only had been vaccinated, and of that number forty-five only died ; whereas one thousand five hundred of the eight thousand who had not been vaccinated were carried off by the pestilence.

“ Vaccine matter evidently loses part of its efficacy in passing from arm to arm ; it is therefore desirable to renew it as often as possible. A remarkable fact mentioned by one of the competitors supplies us with a means of renewing it, as it were, at will. A cow was vaccinated with matter taken from a child. Not only did the pustules rise, but they were communicated to other cows, so that the cow-pox was observed nearly in its natural state. The pustules were identical in both cases.

“ The propriety of re-vaccination is now fully established. In Germany, the various governments have been induced to pay

* This was found among the late Mr. Youatt's papers.

great attention to re-vaccination, owing to the circumstance of epidemics of variola having latterly manifested themselves with a severity to which we had become quite unaccustomed since the introduction of vaccination. Re-vaccination has, consequently, been resorted to on a very extended scale, and has had the effect of arresting the epidemics. Thus, in Wurtemberg, forty-two thousand persons who have been re-vaccinated have only presented eight cases of varioloid, whereas one-third of the cases of variola have latterly occurred on persons who had been vaccinated. It is principally between the ages of fourteen and thirty-five that vaccinated persons are exposed to be attacked by variola. When there is an epidemic, the danger commences earlier, and children of nine years of age may be seized. Prudence, therefore, requires that, under ordinary circumstances, re-vaccination should be performed at the age of fourteen or fifteen, and four years earlier if within the radius of an epidemic of variola."

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

A WEEKLY Council was held at the Society's-house, in Hanover-square, on Wednesday, the 24th of February, 1847; present, the Earl of Egmont, President, in the chair; Capt. Rushout, M.P., Mr. Raymond Barker, Mr. Humphrey Brandreth, Mr. G. J. Bosanquet, Mr. F. C. Cherry, Mr. A. E. Fuller, M.P., Mr. W. G. Hayter, M.P., Mr. J. Kinder, Mr. P. Pusey, M.P., Professor Sewell, Mr. Wm. Shaw, Mr. Barugh Almack, Dr. Calvert, Mr. E. Perkins, Mr. T. Turner, Mr. T. R. Tweed, and Mr. W. B. Webster.

Inhaling Apparatus.—Professor Sewell favoured the Council with the result of his inquiries into the most economical and efficient modes of administering the vapour of æther in the case of animals connected with a farm. He found that the simplest and most economical of these modes was at the same time the most efficient; and that in many cases, especially when the smaller animals, such as lambs, were to be operated upon, a sponge, moistened with æther and held in the palm of the hand, was amply sufficient to induce the required insensibility, when the more cumbersome and costly apparatus prepared expressly for the purpose had entirely failed. For larger animals a bladder, with breathing mouth-piece, was found to answer quite well; and by passing elastic bands over this bladder at different distances, the quantity of æther required in any case could be nicely adjusted. For dogs or other animals, in a state of madness, he had a wire-work muzzle secured over the nose and mouth, and the whole inserted into a small cylindric vessel containing the sponge and æther. He then

explained to the members present how the process of inhalation was conducted, by closing one of the nostrils when the animal inspired, thus obliging it to draw up into the other nostril the vapour of the æther through the sponge applied to it, and then opening the closed nostril in order to allow the expiration to be made through that channel; so that to one of the nostrils the æther was constantly applied, while the other was alternately left open or closed, as the animal inspired or expired from its lungs. He thought that, in spasms of the intestines and in cases of locked-jaw, this induction of insensibility would be found of the highest value; and in all operations on animals connected with a farm, it would afford the greatest facilities, to say nothing of the humanity attending its application. He however thought that it should be used with caution in animals reduced by privation or fatigue, and debilitated by disease, injury, or loss of blood. He exhibited and explained to the council the various simple contrivances, made at an expense in each case almost nominal, for each kind and size of domesticated animal. The thanks of the council were then presented to Professor Sewell for the trouble he had kindly taken, at their request, in submitting these results to their notice.

Mark Lane Express, March 1, 1847.

MORTALITY AMONG SHEEP.

THE lambing season, we regret to learn, has been very unfavourable in this as in neighbouring counties. A great number of ewes have died before yeaning, and many lambs, have also perished, notwithstanding the high degree of care and skill now applied to the production and rearing of these animals. The ewe appears to be first affected in the head: it then lies down, and never rises again alive. Upon examination of the body after death, in many cases no particular disease appears, yet it is certain some fatal epidemic prevails. The remarkable severity of the weather has, doubtless, had some effect in causing the mortality among lambs. —*Hereford Journal, extracted from Bell's Weekly Messenger, March 13, 1847.*

HUNTERIAN ORATION.

[From The Lancet.]

MR. GREEN, who delivered the oration to a crowded auditory, and was received with great and general applause, commenced by passing a high and eloquent eulogium on Hunter, from whom we dated our

rise as scientific surgeons. He proceeded to say, that, however elevated as a surgeon, Hunter rendered essential and enduring service to the whole art of healing, by bringing the practice of that art in closer relation than it had hitherto been with the natural sciences. He referred to his museum, not only as an orderly arrangement of animal life, but as the nucleus of the sciences of comparative anatomy. He then briefly alluded to the great services rendered to science and our profession in general by Hunter having regarded life as a law, and banishing the various hypotheses which had been held respecting it.

How could we regard his excellence as a pattern to others? It could not be overlooked or disregarded that his trait was genius. The orator then proceeded to explain, in an elaborate manner, his view regarding the true nature of genius, and expatiated on the necessity of application and industry, in order that genius itself should acquire power and facility in educing its manifestations. Hunter was a wonderful instance of industry and application, and the divine Milton himself owed much of his skill in "weaving harmonious numbers" to his having begun in early life industriously "to build the lofty rhyme." Education, then, was the means of educing the powers of the mind. He then proceeded to say, that in order to carry out the provisions of the late Charter, and with the view of raising the character and attainments of English surgeons, a preliminary liberal education would be one of the requisites in the candidate for a fellowship, such liberal education being guaranteed by a degree, or an equivalent to it. By this means the character of the profession would be elevated, and hold its rank with the other professions.

He then proceeded, in a strain of eloquence—not always, however, quite intelligible—to shew the value of education. Language, geography, literature, classical, modern, and profane, mathematics, and logic, severally and individually engaged his attention; the advantages of each being illustrated by examples, and in a manner which shewed that the orator had been a "pupil of Samuel Taylor Coleridge."

Lastly, he dwelt for a few minutes on medical science. He said it was scarcely necessary for him to say that every man in practice should have a proper amount of technical knowledge and skill; indeed, no honest man would be without them. What, then, was that amount? He would answer, such an amount as would render such practitioner capable of applying all the resources of our art—all, indeed, that the profession could supply. Every man who had taken advantage of the opportunities afforded him by our institutions would be able to do all that the physician or surgeon could do. The second qualification which he would name for a medical

practitioner was scientific insight, the pursuit of his profession as a scientific one, and the avoidance of puffing and quackery. Of all things, let him avoid that pest of society (*Cheers*). He feared, however, that the contest between legitimate medicine and quackery must last as long as there was moral and physical infirmity, and hope, fear, and credulity, predominated over reason and judgment. The legitimate candidate for practice should hold himself aloof from such degrading practices, and base his pretensions to public favour on science and intelligence. In order to secure this science and intelligence, the education of the surgeon should be commenced in colleges and universities: the early mental and moral training afforded by these institutions would engender honour and gentlemanly feeling, an attachment to all ancient institutions, and, he hoped, an essential union of the profession with the national church.—This last remark drew forth many expressions of dissent.

REVIEW.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

THE REPORT OF THE FARMING OF CORNWALL, *to which the Prize was awarded by the Royal Agricultural Society of England.* By W. F. KARKEEK, *Truro.*

No mean pride—no ordinary exaltation—quickeners our pen on an occasion such as the present, when it becomes our duty, no less than our pleasure, to proclaim to the veterinary profession that one of their brethren has recently obtained the Prize of the Royal Agricultural Society of England; and for no less than having drawn up the best “Report of the Farming of Cornwall.” To be sure, when the name of KARKEEK is read, no person acquainted either with the man or his writings will feel surprise at his having succeeded in any thing of the kind he may have undertaken. Still, we feel a pride we have no care to conceal in holding up a professional brother as—at least upon paper—“the leading star” amongst the agriculturists of the land of “fish, tin, and copper.”

It is well known that the Royal Veterinary College took its rise in an Agricultural Society,—the ODIHAM; it is also known well enough that certain of the best ancient veterinary authors were likewise *Scriptores Rei Rusticæ*. Should we be asked if veterinary science acknowledges any other parent, we answer, “Yes!” and

“a greater one still”—MEDICINE; with her handmaids, CHEMISTRY and BOTANY. In fact, veterinary science, in its broadest scope, is clearly divisible into two large or principal compartments, one *medical*, the other *agricultural*; in the latter of which it is, on a more extended scale than can strictly be called veterinary, Mr. Karkeek has won his laurels. And this suggests to us, had the Royal College of Veterinary Surgeons any notion of revising their “arms,” what appears to our mind an excellently appropriate heraldic composition, viz. a shield, supported on the right by Esculapius, on the left by Ceres, with quarterings of some such devices as an ox, a dog, a sheep, and a pig, and surmounted by a horse in a galloping or vaulting attitude, with a motto expressive of the origin of veterinary science, as the offspring of the union of Ceres with Esculapius, or of Agriculture and Medicine.

But our pen is playing truant—*revenons à nos moutons*.—The part of the “Report” before us which more immediately concerns us, and which, on that account, we are about to take the liberty to transcribe, not doubting that our readers, when they come to peruse it, will thank us for having so done, is

“ THE BREEDS OF SHEEP, CATTLE, HORSES, AND PIGS, IN CORNWALL;”

SHEEP.

Mr. Karkeek informs us,—

“ In very few counties has so complete an alteration taken place in the character of sheep as in Cornwall within the last fifty years. The table of Mr. Luccock, in 1800, assigns to Cornwall 203,000 *short-woolled* sheep, producing 3382 packs of wool; while that of Mr. Hubbard, in 1828, makes no mention of the number of sheep, but of 5920 packs of long wool being yielded by the Cornish flocks. The county attributes this improvement chiefly to the exertions of Mr. Peters, who commenced as a flock-master in 1790, when he introduced, to use his own expression, ‘a waggon load of ewes and a ram’ of the improved Leicesters, and continued crossing this blood with the native breed up to the period of Worgan’s survey in 1810. The Rev. R. Walker and Mr. Rodd also introduced some rams of this blood about this time (the produce being sold to the farmers for the improvement of their flocks), the effect of which may be imagined from Mr. Worgan’s description, ‘that we had as fine a breed of sheep as any county in England.’ About this period (1810) Mr. Peters introduced two rams from a Mr. Kimber’s flock, in the north of Gloucester, who was a pupil of Mr. Bakewell, and who had, by mixing the new Leicester blood with the Cotswolds, become eminent as a breeder in that neigh-

bourhood. These rams were crossed with Mr. Peters's flock generally, until the year 1814, when he again introduced the new Leicesters from Mr. Creswell's flock in Ashby-de-la-Zouch. Mr. Peters's system of breeding appears to have been a continual changing of blood; for either in 1816 or 1818 he again crossed his flock with the Gloucester variety, the effect of which was far from being satisfactory to the farmers, or probably to himself; for we find, from the documents furnished us, that in the course of three or four years afterwards he again introduced the improved Leicesters from Mr. Champion's flock, of Nottingham. This last cross proved to be the most successful one he ever made. From this time, down to the period of his sale in 1841, he twice introduced fresh blood from the Dishley stock, and once from the Gloucester variety, without any improvement. When we consider that during this time Mr. Peters was the only person who held public sales for the letting and selling of rams in the county, we may safely conclude that the Cornish flock at the present time possesses more or less of the Cotswold blood. Other farmers have introduced the pure Leicester blood within the last ten years from Devonshire, and from both Mr. Buckley's and Mr. Burgess's flocks, with considerable success. Among these we should mention Mr. George Bullmore, of Newlyn; Mr. Doble, of Probus; and Mr. Hodge, of Perranzabuloe—the last two individuals being the principal stock-breeders of the county.

"The saving in the cost of production through the early maturity, improvement of fleece, and of form generally, is more than 50 per cent. The old breed were kept from two years to two years and a half before sold, and the best of them did not exceed from 10lbs. to 12lbs. per quarter. They are now sold at one year and one year and a half old, averaging from 18 to 24lbs. per quarter. We have a few flocks of South Downs kept on some gentlemen's parks; and between the rivers Fowey and Tamar there is a breed found with tawny faces and legs—evidently of the South Hams variety; but these last have undergone great improvement by crossing with the Leicester blood, as they will fatten at one year and a quarter old to 20lbs. per quarter. The Cornish farmers pay great attention to the wool, preferring breeding from the heaviest fleece, which affords a very desirable protection to their sheep on our exposed districts. The average weight of fleece is from $7\frac{1}{2}$ to 9lbs.* To

* "The wool in Cornwall is never washed on the sheep's back previous to clipping, but invariably sold in the yolk. This makes a difference in the price of wool, where washing is practised, of 25 per cent., the adding of which to the Cornish prices will make the rateable value of the washed wools of other counties.

"We have been furnished with a list of prices of Cornish wool between the years 1830 and 1844;—the average is $9\frac{3}{4}d.$ per lb. during that time.

encourage a good fleece, and of sound staple, sheep require to be kept well in the spring season; but it sometimes happens, from the scarcity of food—the general consequence of bad farming or overstocking—that this is not attended to; and the difference produced in the weight of wool only—on sheep of the same breed kept in different ways—is as much as 25 per cent.* The principal disease to which our sheep are liable is scouring, which is referable to deficiency of food at one time, and excess of it at another.

CATTLE.

“The breeding and rearing of cattle forms no inconsiderable item in the agricultural economy of the county. A rough estimate of the number bred annually has been made by Sir Charles Lemon, by calculating the number of hides tanned in 1839, and the number exported and imported, which the writer is permitted to make use of. The result is as follows:—

“Store cattle, sold to the eastern dealers, averaging from 5½ to 6 ewt. each	3,500 at 10 <i>l.</i> ...	35,000
Fat cattle ditto ditto	1,200 at 15 <i>l.</i> ...	18,000
Cattle killed in the county	15,950 at 15 <i>l.</i> ...	239,250
Calves ditto ditto	11,550 at 25 <i>s.</i> ...	14,437
	<hr/>	
	32,200 head ...	306,687
There are also some fat cows and a bull occasionally imported, which may be estimated at	900 head ...	10,800
	<hr/>	
	31,300 head ...	£295,887

* “Sheep are very rarely turned on the turnips without being hurdled; the general practice is to cart the roots on the arishes or pastures intended to be broken next in rotation for turnips: besides which, a little hay, and sometimes barley and oats, is afforded them during the severe weather by the best farmers. We are aware of but two instances of feeding of sheep under sheds, practised by Mr. Snell, of Wayton, Landulph, and by Mr. Lawry, of Tregarton, Gorran.

“Mr. Snell’s shed is 70 feet long and 12 feet wide, having a yard attached about 50 feet by 20 feet. This will contain 50 sheep. They are fed three times a-day with sliced turnips, in a manger placed against the inner wall the whole length of the shed. The yard and shed are prepared by laying down during the summer six inches of earth (sand is used by Mr. Lawry), and upon that are placed hedge parings (which are cut, ricked, and thatched for the purpose) and stubble, so that when the sheep are first introduced there is a bed about one foot in depth, and upon which is afterwards daily laid straw or hedge parings from the rick. When the bed becomes inconveniently high for the manger, it is removed, and a fresh one applied. Mr. Snell adds, ‘I have not found my sheep, kept in this manner, more liable to disease than others, except the *foot-rot*, which was easily prevented by carting a quantity of earth in the form of a mound in the centre of the yard, upon which were occasionally strewed small quantities of slaked lime; and this simple remedy has ever since entirely prevented the disease.’

The original breed are of a black colour, but few only of these are found at present: the Devons are now the prevailing breed. The purest stock of the new kind are found at Trebartha, where they have been bred with the greatest care for the last forty years—the late Mr. Rodd having obtained the best of the kind from the neighbourhoods of North and South Molton; but notwithstanding the care and attention that have been paid to obtain the purest Devon stock by him and other breeders, the cattle reared in the north of Devon are still superior to our own, having generally richer coats, and more correct symmetry. This degeneracy has been attributed partly to the herbage, and partly to the climate of Cornwall.

“ *Short-horns*.—Within the last twenty-two years short-horns have been introduced on many farms through the exertions of Mr. Peters, who first purchased some cows from Mr. Wilkinson’s stock, of Penton, Nottingham, and a bull* of Mr. Smith, of Dishley. Other heifers followed from Mr. White, of Leicestershire, and again from Mr. Wilkinson’s stock†. Some years after he introduced a bull‡, which was purchased for him at Mr. Mason’s sale by the Earl Spencer. These laid the foundation of the short-horned breed in Cornwall. A few others have been lately introduced by Messrs. Hendy, Tilly, and Scobell; but the greatest portion of the present breed is derived from Mr. Peters’s stock. Much discussion has taken place from time to time as to the comparative merits of the Devons and Short-horns. The advocates of the former contend that the natural and artificial productions of Cornwall are unsuited to maintain such a breed of large cattle as the Short-horns, and that the Devons are a hardier race, and better adapted to our changeable clime. The advocates of the Short-horns maintain, on the contrary, that theirs are more certain breeders, better milkers and graziers, than any other kind. This is an interesting question. In the rural economy of a district, a high degree of importance is to be ascribed to a knowledge of the distinctive characters of the domesticated animals, since much of the profit derived from them will depend upon adapting the breed to the circumstances in which it may be placed; and there cannot be a question that, on most of our hilly farms, with a short bite of grass, the Devons are preferable; but wherever there is a fair proportion of food, the Short-horns are by far the most profitable.

“ *Crosses*.—It has been a common practice of late to cross the common Devon cow with the short-horned bull§, which generally

* “ Alfred, 24. Red roan, calved July 20th, 1820, got by R. Collings’s Lancaster. Dam, red roan, by Alfred; grand dam by Windsor.

† “ Lady, Peta, Alexandria.

‡ “ Mercury. 119, Coates’s Herd Book.

§ “ The writer is furnished with a document from J. H. Tremayne, Esq..

proves successful—the stock being full one year in advance, in both weight and early maturity, compared with the common average of the Devons. The consequence of this crossing will, however, soon prove injurious, unless care be always taken that pure blood be on one side—the male generally; for where both sire and dam are only half bred, which is sometimes the case with us, the third cross proves a most mongrel stock indeed. Crosses with the Hereford bull have also been successfully made in the south-eastern parts of the county, particularly in the neighbourhood of St. Germans, where this breed has been carefully preserved by the late Earl of St. Germans for the last twenty years.

“ *Feeding of Cattle.*—The usual time to take the cattle into the houses to feed is about the months of October and November, when they are fed on white and yellow turnips, straw and hay, until March; after this on swedes, straw and hay, to the fattening in June. Others feed on straw and turnips until February; and hay, straw, and swedes, until May, and finish on grass afterwards. Others, we are sorry to say, rear a greater number of cattle than they can properly feed, which are kept in a half-starved condition, either in the yards or lanes in the winter, and turned out on the fields in the spring, and on the rough pastures or commons in the summer. Cattle thus kept are sold from four to six years old, varying from £10 to £14 each, and driven by the eastern jobbers up into the pasture lands of other counties to be fed. Some of our best farmers give small quantities of barley during the fattening. Oil-cake is seldom if ever used, and has scarcely been seen by one farmer in a thousand. The common Devon ox, fed in the general way, and with ordinary care, averages $7\frac{1}{2}$ cwt.; cows 5 cwt.; and very many oxen will reach 1000 lbs. weight. Good shelter, warm litter, wholesome and abundant fodder, are the necessities which fortify our stock against the attacks of winter; and, through these, sleekness and good condition—which are the only signs of health and prosperity in the animal—are preserved. There should be no cessation in the rearing and feeding of cattle: those that are stuffed and starved by turns are certain to prove unprofitable to the feeder in every way; for here it is that the inroads of disease are first to be apprehended, and here its attacks will be certain to prove formidable and fatal. The diseases of cattle are neither numerous nor very fatal. The ‘pleuro-pneumonia’ has lately occasioned the death of thousands in other counties, but has never visited us; and the ‘vesicular epizootic,’ which was prevalent here as elsewhere in 1840, did

of Heligan, proving that crosses with the Devon and the Teeswater breeds were made a great many years since in Cornwall, some of that blood having been introduced by the grandfather of the present Earl of Falmouth, at Tregothnan, in 1790.

not prove dangerous. The most formidable diseases are diarrhœa, dysentery, constipation, and red-water, which are too frequently occasioned by injudicious feeding, and the want of proper care and treatment.

HORSES.

“ There is no subject connected with Cornish farming in which greater neglect is exhibited than in the breeding and rearing of horses. Our stock is generally bad, which is partly attributable to the mares, partly to the stallions, and partly to the method of rearing. The brood mares are not of a very superior description, many of them shewing the bone and muscle in the wrong places—too much in their heads and necks, and too little in their limbs; but a great many are strong, active animals, varying from 14 to 15 hands high. These do not cross well with the thorough-bred stallions*, the produce being a weedy, trashy race, too light for the general purposes of riding or driving. The majority of the stallions that have been introduced have been unfortunately either broken down by premature labour, or, having exercised their vocations, and been condemned as breeding stallions in other places, have been sent into Cornwall by way of a finish. A correspondent†, who has bred from some twenty-five mares of good figure and size with the blood-horses, says, ‘ that he is correct in stating that not one colt in the whole lot turned out well.’ The farmers, seeing the effect of breeding in this manner, have for several years encouraged half-bred stallions of size and power, and, in cases where they have possessed sufficient *action*, the produce have answered extremely well; for, where they have not succeeded as gig or saddle-horses, they generally make strong and useful labour ones on the farms. But where, from want of proper selection, the males have been wanting in that necessary quality (*action*), and more particularly when this is absent also on the dam’s side,—which is frequently the case,—the produce proves of very inferior character indeed. Our soils being generally light, our horses also are of a light description. The greatest part of the heavy draught breed are supplied from North and South Wales, and Shrewsbury; their prices varying from £15 to £25

* “ Some years since, with a view of introducing a stallion for the purpose of improving the breed of saddle horses in Cornwall, I consulted with Mr. Youatt on the subject, and he recommended an Arab stallion. With many of our mares, such as those possessing heavy heads and necks, and thick, upright shoulders, the cross would do a deal of good, and could not possibly do any harm. The principal object is to obtain a compact frame and vigour, and we possess these qualifications in an eminent degree in the Arab; after which, if size and power were required, the female progeny might be crossed with an active ‘Cleveland bay.’

† Mr. Trethewy, of Trewithen, Probuss.

each, at three years old. These were introduced as the fashion prevailed for better appointed horse-teams, and the working of horses instead of oxen.

“Rearing of Horses.—A great deal of mismanagement occurs in this department also, for it frequently happens that the young animal is introduced tolerably perfect into the world, but is rendered useless by our system of rearing. This proceeds from a mistaken economy on the part of the farmers, many of whom consider any keep good enough for this description of stock; and they are consequently often left to struggle through a winter as well as they can, unhoused, unsheltered, and with no food but what they can grub up from the frozen ground—excepting when the herbage is buried in snow, and then a small quantity of hay or straw and a few turnips are afforded them. ‘The Cornwall Agricultural Association’ has endeavoured to correct this short-sighted and miscalculating system of privation, by offering premiums for yearling colts and fillies; while at the same time they have enforced on the breeders the necessity of affording shelter and a more liberal supply of food, especially during the first two winters. Daily experience fully proves the impolicy of neglecting young stock of any kind; but such neglect is especially impolitic and injurious in the case of those animals whose value depends on their size, strength, and powers of endurance—qualifications mainly promoted by liberal feeding and careful treatment.

“Feeding of Horses.—This is a very important subject, inasmuch as the maintenance of horses forms a considerable item of the farmer’s expenditure. The general mode is grazing, or soiling, in the summer, and hay, straw, and oats in the winter. The soiling of horses in the summer is getting into practice, it being found the most economical mode; for one acre of grass or clover mowed, and given to the horse in the stable, will go further than double the quantity fed off, independently of its producing an excellent manure*. Tares with rye, sown early in the autumn, produce a large

* “Soiling to a considerable extent has been pursued by Mr. J. Roskrugé, of Roskrugé, St. Anthony West. He says: ‘I kept from the third week in April to the same time in August (1842) 6 horses, 1 colt, 1 bull, 4 working oxen (4 others had their dinners), and 15 pigs, on $4\frac{1}{2}$ acres of Italian rye grass and red clover, and three quarters of an acre of vetches. In 1843 I kept from the 1st of May to the 1st of June 40 head of cattle and horses and 20 pigs, when, from the want of sufficient accommodation, I was obliged to turn part of my stock out; but I continued keeping 7 horses, 2 colts, 6 working oxen, 1 bull, and 20 pigs, until the 2d of August, on 4 acres of red clover.

“‘In 1844 I kept from the last week in April to the third week in August, 9 horses, 2 colts, 28 head of cattle, 50 pigs (the youngsters had in addition the wash from the house), on $8\frac{1}{2}$ acres of Italian rye-grass and red clover.

“‘The quantity of manure I can make by this method of feeding stock is

quantity of spring feed, and are cultivated chiefly for this purpose on a great many farms. The introduction of the chaff-cutter has considerably reduced the expense of horse-keep in the winter months: the saving in the item of hay only, by giving chaffed straw and clover instead of an unlimited supply of hay, is immense. The usual proportion of chaff and oats is from 6 lbs. to 8 lbs. of oats to every 20 lbs. of chaff; and 20 lbs. to 30 lbs. of this mixture is sufficient for our agricultural horses, according to size, with fair or even hard work; the hay in the rick being omitted altogether. Of late the swede turnip has been introduced as food for horses, in conjunction with straw, hay, oats, &c. The following allowance has been used on Barteliver farm in Probus for a number of years, —No. 1 used during a scarcity of hay, No. 2 when plentiful:—

No. 1.			No. 2.		
	s.	d.		s.	d.
10 lbs. of chaffed straw, at 20s.			16 lbs. of hay (chaffed).....	0	6
per ton	0	1	6 lbs. of oats.....	0	4½
12 lbs. of oats	0	9½	16 lbs. of swedes.....	0	1
16 lbs. of swedes.....	0	1	Expenses of cutting and chaff-		
Expenses of cutting and chaff-			ing.....	0	0½
ing.....	0	0½			
Cost of keep per day...	1	0	Cost of keep per day...	1	0

A great many farmers find their advantage in steaming swedes as food for horses, and this practice is becoming very common. Steam apparatus of various kinds are manufactured in the county for this purpose. I witnessed a very superior one of this kind on Colonel Scobel's estate in Sancreed. The boiler is 12 feet in length, and 6 feet in diameter; which, at an expenditure only of 8 cwt. of coals per week, supplied, in the winter of 1843, 100 head of fattening and store cattle, 30 horses and colts, and 100 pigs with steamed potatoes and turnips, and chaffed straw and hay, also steamed; all this stock, too, being kept on a farm of 150 acres. The fattening pigs are fed on steamed potatoes, with about 12 gallons of barley each. The store pigs get nothing else than the steamed turnips, and the drainage from the steam vats, being the condensed liquid produced after the process of steaming. The advantage derived from this method of feeding horses on cooked food in the

immense, being more than sufficient to meet the expense incurred in cutting, carting, and feeding.' He adds, 'I keep nearly double the quantity of stock that I did before I commenced the soiling system, and in a much better condition. I can also cut a greater quantity of hay per acre, and put more land into tillage; and I am fully persuaded that it is the groundwork of good farming on arable land, and no farmer can make a profit without it.'

winter months is very considerable. I have seen it practised on a great number of farms—the horses sometimes getting scarcely any thing else than straw and steamed turnips, a little hay and oats occasionally when hard worked; and although they perspire more freely than those fed in the usual way, yet they look exceedingly well, are particularly sleek and fine in their coats, and appear to do their work as well as horses fed only on hay and oats; and, on the whole, they are less liable to disease*. If there is any truth in Liebig's statement—‘that every manifestation of force, however trivial, is accompanied by a change of matter in the body’—it must be evident that there is no inconsiderable saving effected in the wear and tear of the tissues, as well as in the consumption of fat, in feeding animals in this manner. In the cutting of hay and straw into chaff, in the slicing of turnips, and in the bruising of oats and beans, we have examples of economy unwittingly practised by the farmer; and there cannot be a doubt that the cooking of food, for cattle particularly, will be found to effect still further saving.

PIGS.

“The improvement effected in the breed of pigs within the last twenty years is greater than in any other of our domesticated animals. The old Cornish variety was a large, white-coloured, long-sided, heavy-boned, razor-backed animal, that possessed little aptitude to fatten. It is now nearly extinct, and when found is looked on with wonder. The present varieties are crossings of the old breed with the Berkshire, Leicester, Chinese, Neapolitan, and the improved Essex. The black-coloured pigs are preferred, as the skin of this kind does not blister with the heat of the sun, as in the white-coloured breed. They require little other food than vegetables and the wash of the farm-house, except during the fattening, when 24 gallons of barley-meal will suffice to bring them up, at nine months old, to from 350 to 400 lbs.”

* “Farm horses are peculiarly liable to flatulent cholic, inflammation of the bowels, and acute indigestion, which frequently arises from an indiscriminate use of barley-straw and ill saved hay. Pneumonia, or inflammation of the substance of the lungs, is seldom met with. This arises from the mean temperature of the climate, being in Cornwall only 8°—that of London is 11°; the effect of which is, that the warmth of summer is never so great as to occasion either a too rapid development or too high an excitement of organized bodies, nor the cold of winter so extreme as to depress the vitality to an injurious degree. On the contrary, tetanic diseases are very common among horses: even the hardy donkey has been known to die of traumatic and idiopathic tetanus in a district bordering on the south channel. This probably arises from the immense oceanic boundary of the Cornish peninsula.

VETERINARY JURISPRUDENCE.

WARRANTY OF A HORSE.

CROSSLY v. SINGLETON and others.

Mr. Sergeant Murphy and Mr. Warren were for the Plaintiff, and Mr. Martin and Mr. Atherton for the Defendants.

Mr. Sergeant Murphy stated that the present action was one to recover damages from the defendants, who were large brewers at Leeds, for a breach of warranty as to a grey mare sold by them to the plaintiff, who was engaged in conducting boats on a canal which runs between Leeds and Wakefield. On the 10th of September last the plaintiff went to the brewery of the defendants, hearing they had a cart-horse to sell, he being in want of one. A person of the name of William Tailor accompanied him. They saw the mare, and afterwards saw one George Colt, a manager of the farms of the defendants, and also bought and sold horses on their account. The plaintiff agreed with Colt for the mare in question. He was asked £26 for her, and at length agreed to give £24. She was then warranted by Colt to be quiet, and to go in the shafts. The money was paid, but the mare was not taken away until the next day, the 11th, when again Colt spoke of her being fit for the use to which the plaintiff intended to put her. But when tried it was found that she would not draw at all; she became restive, lay on the ground, and broke a cart to which she had been put. Notice was then given to the defendants to take her back; but that they declined doing, and they would do no more than make plaintiff an offer of the sum of £4. He refused that sum. The mare was eventually sold by him at public auction, when she brought £13.5s. Besides the difference between the sum paid for her and that produced at the sale, the plaintiff had incurred expenses in keeping her from the 11th of September till the month following, and the amount of those expenses also was now claimed by him.

Three witnesses were called by the plaintiff;—Wm. Tailor, a collier; Thomas Dixon, a labouring man; and George Colt, the hind or farmer of the defendants.

Tailor's evidence was, that he had gone with the plaintiff to Colt to bargain for the mare, which he and plaintiff looked at in Colt's presence; but it appeared that the witness had not been present during a material part of the bargaining between the plaintiff and Colt. He was asked as to what had passed respecting the price to be paid, and it then appeared that he had merely heard

a declaration made by Colt as to what he (Colt) and the plaintiff had just before agreed upon in the witness's absence.

The learned Judge was of opinion that this evidence would not do.

The learned Counsel for the plaintiff argued, that, as Colt acted as the agent of the defendants, statements by him with reference to the transaction were evidence of the terms of the contract.

His Lordship said that would be so, undoubtedly, supposing the statement or admission to have formed a part of the act of the agent when making the contract; but the admission of an agent after the contract was once made, without any authority from the principal to make such admission, was no evidence against the principal.

Upon his Lordship's suggestion, the agent,

George Colt, was called for the plaintiff, though it appeared that the plaintiff had not intended making him a witness. Upon examination he admitted that he had long acted for the defendants as their agent upon such occasions, but he denied that he had ever warranted the mare; he had, on the contrary, told the plaintiff that he was to take her with all her faults as she was, and that she was "to go for right." When asked if his master had a stud of horses called "Singleton's greys," he replied that he should say no more. They were greys; and the plaintiff never asked him whether the mare was quiet in harness or fit to go in the shafts. All he (the witness) was asked was, whether she was quiet in the stable. Nothing was said as to whether she would draw, or how she could work.

The witness Dixon spoke to the agent Colt having said, on the 11th of September, to the plaintiff that the mare would work any where, and that she was fit for the shafts.

His Lordship, however, ruled that this evidence was similar to that of the first witness, and deficient upon the same grounds. The learned Judge, however, offered to leave the case to the jury, if the plaintiff's counsel preferred not to be nonsuited; and the jury were eventually directed to find a verdict for the defendants.

Morning Chronicle, March 13, 1847.

HYDER v. DIXON.

This was an action brought by Captain Hyder, formerly belonging to the 10th Dragoons, against Mr. Alfred Dixon, the son of the proprietor of the well-known horse repository in Barbican, to recover the value of a race-horse, known by the name of "The Devil

among the Tailors," sold to him by the defendant, and warranted sound.

Mr. Montagu Chambers, and Mr. Bovell were for the plaintiff, and Mr. Sergeant Shee and Mr. Bramwell for the defendant.

It appeared that "The Devil among the Tailors" had been run by Mr. Dixon at Tunbridge Wells, Canterbury, and Chatham races, in the autumn of last year, and was very successful, being the winner on several occasions, and at one of the meetings he ran as many as five heats. At Chatham races he was again successful, and, according to the evidence of one of the witnesses, he bore the character of being a very good "country plater," and upon this occasion he was claimed by a person named Messer, according to the terms of the race, for £80; but Mr. Dixon was unwilling to sell him, and ultimately gave Messer £20 not to press his claim. Captain Hyder, who had been steward at one of the races where the horse had run, and was aware of his capabilities, afterwards entered into a negotiation with Mr. Dixon for the purchase of the horse, and it was at length arranged that he should give £110 for him, and a cheque for that amount upon Messrs. Cox and Greenwood was given to the defendant; but it was arranged that the transaction should not be considered completed until the horse was delivered safely at Brown's training stables in Lewes, and then the cheque was paid. The horse was taken to Lewes in due course, and upon the cheque being presented for payment, the clerk who cashed it, it appeared, took upon himself to require the defendant to state, on the receipt he gave upon that occasion, that the horse was warranted sound. This, it seemed, took place on the 15th of September, the original bargain for the sale having been concluded on the 10th; and this interval formed a material point in the present inquiry. It seemed that the horse arrived at Lewes on the 12th of September, and it was soon perceived that he was very ill, and it was found necessary to call in the assistance of a veterinary surgeon; but the remedies he prescribed were of no avail, for the horse went on lingering and wasting until the 21st, and then died; and on his being opened it was found that his kidneys were very much diseased, and this disease was the cause of his death; and the veterinary surgeon who had been called in stated his opinion to be, that the disorder had existed for a fortnight or three weeks before the death of the horse took place, and consequently that the animal must have been unsound at the time the warranty was given. But it was admitted on cross-examination that horses were frequently attacked with inflammation and other maladies very suddenly, which would cause their death in a few hours; and that it was very improbable, if the horse had been suffering from the fatal disease in the kidneys at the time he was

sold by the defendant, that he could have run five severe heats at the Chatham races, and have won the race.

Mr. Sergeant Shee, on behalf of the defendant, complained that, by the proceeding of the bankers' clerk, he was made answerable for a supposed warranty of the 15th of September, when, if one had really been given at any time, it must have been on the 10th, when the horse was sold, and when even, according to the evidence of the plaintiff's own witnesses, he might have been perfectly sound. He then went on to say, that, agreeably to his instructions, the horse was, in point of fact, perfectly sound when he was delivered, according to the instructions of the plaintiff, to the trainer at Lewes; that the malady must have come on suddenly, either from the change of stable or some other cause; and that therefore the defendant was not liable for a breach of warranty.

The groom who took the horse from Chatham to Lewes was examined, and he proved that the horse appeared quite well during the journey between the two places; and that on the following morning, after his arrival at Lewes, he cantered him for about an hour upon the downs, and did not observe any thing the matter with him. Some other witnesses were also examined in support of the statement made by the learned Sergeant.

The jury found for the plaintiff, damages £112, that sum including some expenses that had been incurred by the plaintiff in doctoring the horse prior to his death.

Morning Chronicle.

GETHING *v.* JAMES.

THIS was an action brought to recover the value of a horse warranted to be sound by the defendant at the time he sold it to the plaintiff. The defendant by his plea denied that the horse was unsound at the time of sale, or, if unsound, that he gave the customary warranty.

Mr. Humphrey, Q.C., and *Mr. Waddington*, appeared as counsel for the plaintiff, and *Mr. Whitehurst*, Q.C., and *Mr. Macaulay*, for the defendant.

The plaintiff, *Mr. Gething*, is an extensive horse-dealer, residing at Grantham, and the defendant carries on the same business, on a respectable scale, at Nottingham. On the 14th of January, 1846 (being Nottingham fair), the defendant sold to the plaintiff a bay horse for £100, and at the time of payment the usual warrant of soundness was said to have been given. At the time of the sale the plaintiff and other witnesses noticed that the horse exhibited

a little tightness of breathing, and a slight discharge from the nostrils. The defendant, in reply, said that it was only a slight cold,—that the horse was “all right;” and the warranty having been entered in the plaintiff’s memorandum-book, the horse, upon purchase, was removed to the stable of the Spread Eagle Inn, where the plaintiff had other horses standing. Upon the horse being removed to Grantham the next day, the animal exhibited symptoms of unsoundness, and on the third day it was placed under the care of a veterinary surgeon. The plaintiff wrote to the defendant, stating the condition of the animal, but expressing a hope that, as he fed well, he would soon be better. This letter was written on the 23d of January. It was stated, however, by a Mr. Urcock, a gentleman in the plaintiff’s employ, that the horse “blew thick” in the wind, had a discharge from the nostrils, and would not feed. Mr. Hardy, a veterinary surgeon, of Grantham, was called in, the horse was blistered on the throat and side, and had a seton placed in his chest. In time, the horse gradually became better, and, being “got ready,” he was brought to Lincoln fair on the 20th of April. When he arrived in that city the old symptoms of unsoundness returned: he was removed to the stables of Mr. Richardson, a veterinary surgeon, and died in the course of the same week. A *post-mortem* examination of the animal took place, and the veterinary surgeons (more especially Mr. Richardson, of Lincoln) gave it as their opinion that the cause of death was a chronic affection of the lungs, part of which were rotten, and completely consumed away. The disease, according to these gentlemen, must have existed a considerable time.

The witnesses for the plaintiff were cross-examined, with the view of shewing that the horse might have caught cold, or the disease with which it was afterwards afflicted might have been caught or communicated at the Spread Eagle stables, in Nottingham, where it was removed after its purchase by the plaintiff; and that on more than one occasion, while at Grantham, the horse had been ridden out by the plaintiff’s servants to meet the hounds. These witnesses, however, although closely pressed by Mr. Whitehurst, denied that they had ever galloped the horse, or ever boasted that the colt was a “hard and capital fencer.”

For the defence it was contended that, at the time of the sale, the colt was perfectly sound; that, if it coughed at Nottingham, it was in consequence of being exposed to cold near an open window in the stables of the Spread Eagle Inn, where it was removed by the servant of the plaintiff; that they had no evidence as to the treatment which the colt received from the person who remov-

ed it from Nottingham to Grantham, the morning after the purchase; that in all probability the inflammation which exhibited itself on the third day at Grantham was in consequence of the cold it had taken in the Spread Eagle stables at Nottingham, aggravated by the journey from Nottingham the succeeding morning; and that so far from the plaintiff complaining or returning the horse on the 23d of January (eight days after the sale), he wrote a letter to the defendant, expressing an opinion that, although the horse coughed, it would, he hoped, soon be well. It was established also in the course of the defence, that the colt, during its stay at Grantham (after the purchase at Nottingham), had occasionally been ridden after the hounds in the sporting country adjacent to that town. Moreover, a son of the defendant, James, swore most positively that one of the principal witnesses for the plaintiff—a person named Barton (who acts as, and has hitherto been considered a respectable agent in the sale of horses) was not present in Parliament-street, Nottingham, when his father, the defendant, sold the horse, and gave a warranty to the plaintiff. The strongest evidence given—for it acted both ways—was that of Mr. Charles Spooner, of London, the well-known and distinguished Professor in the Royal Veterinary College. The effect of this gentleman's evidence was, that, from his experience and knowledge of the diseases of horses, the scirrhus appearances described by Richardson could not have existed upon the lungs, otherwise the horse could not, in the subsequent three months, have done certain work, as described by the defendant's witnesses. He was of opinion that the disease might have been formed about the time of the sale, when the horse was taken from a warm box, and afterwards exposed to cold either at the Spread Eagle or on the journey to Grantham.

It is impossible, within a reasonable space, to give a detailed report of Mr. Spooner's evidence, for it partook more of the character of a lecture upon veterinary surgery (and it was listened to with great attention by the profession) than of the ordinary evidence given by practical scientific witnesses.

At three o'clock, the trial having lasted altogether eleven hours, the jury retired to consider their verdict. Having been absent an hour and a half, they made their appearance in court, and

The Foreman announced that it was impossible that they could agree. He wished to know, how, under such circumstances, they were to act.

Mr. Baron Parke intimated that the usual practice was to confine juries a reasonable time, for the purpose of enabling them to come to an unanimous verdict.

Mr. Humphrey (for the plaintiff) said that he was not one of those who thought locking them up for an entire night was likely to improve their judgment or add to their information (*Laughter*).

A Juror.—"We are nine to three,
"And cannot agree." (*Loud laughter.*)

Mr. Baron Parke said he was afraid that no other course was left than that the jury must again retire.

The gentlemen were consequently about to leave the court to resume their cogitations, when

Mr. Whitehurst stated that he would consent to the discharge of the jury.

Mr. Baron Parke, after a short pause, addressed *Mr. Humphrey* (the counsel for the plaintiff), and asked whether that was not the best course for both parties.

Mr. Humphrey said, that he admitted no good was likely to ensue from the further detention of the jury, but that he could not give his consent.

Mr. Baron Parke then, of his own authority, discharged the jury; the effect of which will be that the trial is altogether a nullity.

The Times, March 11, 1847.

THE VETERINARIAN, APRIL 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

ONE grand object sought by the Committee of Veterinary Surgeons, associated for the purpose of concocting and petitioning for a Charter, but an object in which they were likely to fail and did fail in obtaining, was the identical one which constitutes the main feature of the present Medical Registration Bill; viz. a right by certificate or license, or both, to practise as surgeon or as veterinary surgeon, with power by law to enforce that right, by the infliction of penalty on the uncertificated or unlicensed transgressors of it. We repeat, the Veterinary Committee were not likely to succeed in this desirable prayer of their petition; and for two

reasons:—one being, that their “elder brothers,” the surgeons, had no such privilege granted them; the other, that the Home Secretary of that day—Sir James Graham—held that no such enactment was required by practitioners of the healing art, the public being able to judge for themselves between medical competence and incompetence, professional honesty and fraud; and that as surgeons and veterinary surgeons were, or ought to be, men of superior skill and ability in their respective arts, they would be sure, in the long-run, to go a-head of any empirics or pretenders in medicine*. No doubt, Sir James’s head was full of liberal free-trade principles when he answered the Committee after this manner: free trade, however, well as it may work in commercial transactions, is—has, indeed, over and over again proved itself to be—in *medicine*, a most dangerous maxim. It was free trade in medicine, or, what is the same thing, *free practice*, that did the fatal mischief the other day with the almond water; it was free practice that used to kill and ruin more horses in our cavalry and other large equine establishments in one year than now die in ten; it was free practice that killed so many of our cattle at the time they had the murrain raging among them. These are the fruits—the natural fruits—of *free trade in medicine*!

The public, it is said, will know how to discriminate between a scientific practitioner of medicine and a man of no skill or craft in what he equally professes. So they will; but not until after the mischief is done. The judgment of the public in medical matters is necessarily governed by *results*. They possess no knowledge—they pretend to none—of medical practice itself; but they know well enough by their own feelings whether “the doctor” has “cured” them or not; and are equally good judges of the benefit their sick or lame animals have derived from the aid of the veterinary surgeon or cowleech. Supposing the case of sickness or lameness, whatever it may be, to do well—and we know how many cases there be, so over-powering is the *vis medicatrix naturæ* in animals, that, “in spite of the doctor,” eventually do do well—“the doctor” is said to be a clever fellow, and the affair is at an end. Supposing, however, the case turns out differently from what

* The reply given to the Veterinary Committee deputed to wait upon the Secretary.

was anticipated by the owner of the (animal) patient, or what was represented by "the doctor," then suspicions become aroused in the mind of the one, and the ignorance or mal-treatment of the other stands a chance of becoming exposed; still, however, but a *chance* of being brought to light; for many an ignoramus, with a brazen front and a smooth unscrupulous tongue, will bear down all such "mishaps" as these, and still maintain his "reputation" untarnished.

The public, however, in medical concerns are not only liable to be imposed upon; they are of themselves, in the exercise of the judgment they receive credit for possessing, continually running into error, misled by external appearances, the only *criteria* or *data* they have to form any opinion upon. For example, a horse or an ox receives a large flesh wound in some part of its body: the village farrier is sent for, who dresses the wound with "hot oils" and "digestives;" and *in time*, the wound, which has been kept long retarded in its efforts to heal by the "remedies" made use of, closes up, and "the doctor" receives credit for being "a clever fellow." Another horse having a "wound," though of a different description, such as is familiarly known by the appellation of "poll evil" or "fistula," is taken to a veterinary surgeon to be treated; and he finds it necessary to probe and dilate the sinuous cavities of the sore, to run setons through them perhaps, frequently to change his dressings, &c., not "curing" the animal, after all, for some very considerable time. "What a blundering stupid fellow! Why the farrier cured his 'wound' in half the space of time." Such is one example of the manner in which, and the fairness with which, the public are too prone to exercise their "judgment."

Seeing, then, that the public are both so liable to be deceived and to deceive themselves in venturing upon any estimate of medical ability, and in the exercise of a right they ever should and ever must possess of choosing their own "medical man," would it not be both considerate and proper on the part of the Legislature to lend them a little aid in putting into practice so momentous a right? Would it not be prudent to afford them means of distinguishing those practitioners of medicine who really were by education qualified and licensed from those who were not? And then, if they persisted in employing the latter, they would know they had no

person to blame for mal-practice but themselves; whereas, had they employed a "regular" practitioner, for any error he through ignorance or wilfulness might commit, they would have their remedy at law, to say nothing of the damage the individual himself would or might sustain from such legal prosecution and exposure. From what has been said, then—and a great deal more might be said on the subject—we find ourselves unable to come to any other conclusion save that of its being both requisite and desirable that surgeons and veterinary surgeons should by Parliament be furnished with their appropriate "Bills of Registration."

So far have we discussed the question of "registration" as regards the public. We may now take a cursory glance at another side of it,—the side which presents any ground, or right, or reason, the medical professions themselves have to seek such legislative acknowledgments. There seems to us to be a little inconsistency—to say nothing about the fairness or justice of the act—for the GOVERNMENT of our country to patronize and by parliamentary grants to promote veterinary schools, and yet to turn the *élèves* of such schools, the moment they have received their diplomas, adrift into the country to practise, unacknowledged until lately by the Legislature, and still unsupported by any further protection. After the cost of labour and time and money, students of veterinary medicine have been put to, surely they ought to have an exclusive or legally protected right to the *name* they have so dearly paid for! In the face of which, what happens?—Why, that some farrier comes and takes up his residence next door to the regularly educated man, and writes over his gateway, "Veterinary Surgeon." An incident in a farce we once heard of being enacted, seems so applicable by way of illustration here, that we cannot help narrating it. A physician luxuriating in fame and practice, under the name of SANGRADO, had living next door to him a poor apothecary, whose name was likewise Sangrado, but upon whom the sun of good fortune had hitherto refused to shine; and the consequence was, that while the physician sported his carriage and his claret, the apothecary had hard work to make both ends meet. One day, however, as the neglected apothecary was ruminating on his ill fortune, and comparing in his mind his own hapless lot with that of the physician, it on a sudden struck him that

by assuming the title of "Doctor," and palming himself upon the public—he being of the same name—as being *related* to the great physician, it might improve his practice. Accordingly, without loss of time, he went to the carpenter for a new board over his door, upon which, in large and golden capitals, he had inscribed—"Dr. Sangrado, RELATED to the Physician next door." The real "doctor" stepping, on the following morning, as was his daily custom, from his doorway into his carriage, by accident had his eye caught by the flaming new board of his neighbour; and, with tremendous double knock at the door underneath the said board, summoned the apothecary to his presence. "Pray, sirrah! how *dare* you blazon yourself to the world with such unparalleled effrontery and falsehood as a relative of *mine*, and betitle yourself Doctor, too?"—To which enraged attack the cool and temperate reply of the neglected apothecary was, that he "had discovered some distant relationship between their mutual progenitors; and that as for the title of 'Doctor' he intended to maintain it upon his board and cards until the law compelled him to take it off." In the plot of the farce, the *ruse* was said to answer: the apothecary's business increased as a "physician," and he became a thriving character; though it is not stated that any very great reverse of fortune befel the veritable *doctor medicinæ*.

The same impositions have occurred in our own days, and still indeed do occur. Everybody knows that the great SIR ASTLEY COOPER was by the lower orders, and by very many of the middling orders of people too, called "Sir *Ashley*," or, more commonly, plain "ASHLEY COOPER." Empiricism, or rather imposture, speedily caught hold of this misnomer; and the result was, a deluge of advertisements and chalkings-on-the-wall about *Ashley* COOPER'S pills and powders and consultations, &c. Since then we have had DR. LOCOCK'S "pulmonic wafers." And in every town and village in the country, in the place of "farrier and cow-leech," we now see placarded, "VETERINARY"—often "*vitenary* surgeon." So are the public gulled, so are the faculty cheated out of their good names; for, lucklessly, we cannot in this matter, with the great dramatist, say

"What's in a name?"

By names and outward appearances are the folks—we were going to write *the flats*—caught; and say what you may, and *be* what you may, without a name, and some powder of post too, there is no getting on in this oddly-constituted world of ours.

The communication of Messrs. Henderson and Cherry will cast a damper upon ætherization, so far as horses at least are concerned. From the accounts contained in our last Number, strengthened by others in our impression for the present month, we were hardly prepared for such a result as this; notwithstanding, as we must confess, Mr. Mayhew from the first warned us not to be too sanguine in our anticipations. So far as a solitary experiment we have made ourselves has gone, we must acknowledge it proved a complete failure; but this result was attributed to the imperfection of the apparatus used. It does appear to us that we stand sadly in want of some inhaling machine or contrivance which will effectually compel the inhalation of the fumes at the same time that it admits of the free escape of the expired air. It is no more than we should expect that the animal under the administration of the ætherial vapour should, from annoyance and excitement, prove highly unmanageable, or require more than ordinary means to control him; at the same time, supposing the inhaling apparatus so contrived that it could be securely buckled or fastened upon the head, by having sufficient force and means at hand, the animal might be restrained until such (short) time as it took to ætherise, and so to lethargise him; then, all would be quiet—all, in effect, *dead*, and operations or any thing else might be proceeded with. This is the consummation “devoutly to be wished,” and this, it is still hoped, will be in the end achieved: in the mean time we urge such veterinary surgeons as have opportunities to persevere in trials and experiments. It cannot require any great length of time, or any very great number of experiments, to determine, so far as animals are concerned, the utility of æther as a suspender of sensibility or an antidote against pain.

The subscribers to THE VETERINARIAN will rejoice to see, in the number for this month, a paper from the President of the Royal College of Veterinary Surgeons. We need not remind those veterinarians who have been witnesses to the transactions going on since the obtainment of our Charter—who have but heard even of the professional business connected with that glorious affair which has necessarily fallen into the hands of Mr. Thomas Turner—the meetings, the deputations, the consultations, that gentleman has had to attend, and has most scrupulously attended—the letters he has had to answer, &c. &c.;—we say, those who have heard of these things—and who in the profession has not?—will feel no surprise at his name honouring our pages so rarely as it does. Lest, however, they might deduce any erroneous inferences from the circumstance, we feel we can with the fullest assurance inform them, that THE VETERINARIAN has not a warmer friend in existence than our excellent and indefatigable President.

His paper “on wounded and divided tendons,” occasioned by hunting over a country in which flint stones so abound, that it is proverbially said, “the more you pick off, the more make their appearance,” will be perused with the most lively interest. In every line it bears the impress of *practice*—actual practice. It is a picture painted on the spot, and sent to the engraver without gloss or varnish; and one of which it becomes the duty of the young veterinarian going into a hunting country to practise, to make in his mind as true and faithful a copy as he can.

The subject Mr. Cherry has embarked in—CATTLE PATHOLOGY—constitutes of itself no less than the SECOND grand division of veterinary science, the first division being engrossed by the horse. Extraordinary as it may appear, the fact, as stated by Mr. Cherry, is incapable of being gainsaid, viz., that for half a century cattle pathology, as a science, has virtually lain in abeyance—so far at least as the English veterinary school has troubled itself on the subject, and notwithstanding that school originated in an *agricultural* society. As the pages of this Journal for some considerable length of time have shewn, few veterinarians have prosecuted

the subject with the same *practical* success as Mr. Cartwright, of Whitchurch. Many valuable papers and cases illustrative of cattle pathology have issued from the pen of that gentleman, and for them the veterinary public, together with ourselves, are under no light obligations to him.

Two forcible reasons will occur to the reflecting veterinarian why it is his duty to make cattle as well as horse pathology his study: one is, the decline which from various causes has all over the kingdom taken place in horse practice; the other, the rise of late years cattle have undergone in value, and the consequent greater necessity there exists for rescuing them out of sickness or unthriving conditions. An ox worth twenty pounds is more likely to pay for saving than a horse of like value; because life being saved, and digestive powers preserved, lame or sound, upon three legs even, the ox can be fatted to fetch his price; whereas, unless a horse can be got into full health and strength, and withal be made to go "sound," all medicine and medical attendance are tantamount, almost, to being thrown away upon him.

The science of cattle pathology has suffered much in improvement from two causes;—for want of a teacher qualified by extensive practice and long experience in the farm-yard and the fold for his task; and for want of a locality where the *clinique* of the science might be taught from present observation and actual handicraft. From the opportunities Mr. Arthur Cherry has had afforded him by a wide range of country practice for many years, he is the metropolitan man we ourselves should select to supply the first want; and as for the second, there stand not, that we can see, any great difficulties in the way either of making the desired field of practice, or of finding it ready made.

Our readers will not forget "the first Monday in May," the day of the ANNUAL GENERAL MEETING. Every friend of the CAUSE OF THE CHARTER will attend.

MISCELLANEA.

BURKING HORSES.

[From the Morning Chronicle.]

AT the Essex adjourned Quarter Sessions, at the Shire Hall, Chelmsford, on Thursday, Edward Bently, known as a knacker-man, was indicted for killing, by means of the most cruel process of suffocation, a gelding, the property of Mr. Thomas Slack, a respectable farmer, living at East Hanningfield, a small village near Chelmsford. Since the prisoner's commitment, it has been satisfactorily ascertained that he has been carrying on the atrocious system for a considerable time. He was in the habit of buying dead horses for the London markets, and in no less than twenty-four instances has he been known to be the first to call, and eventually buy dead cattle, that up to their death had been in a fine and healthy condition. Many of them were of a valuable description, and the mode he adopted to destroy them was, to choke up their nostrils with haybands, and finally tie up their jaws with ropes. The poor things would fall to the ground from exhaustion, and on expiring he would remove the hay and rope, and then call upon the owner to buy them. Several witnesses proved the facts of the case. The identity of the prisoner was fully proved. The evidence of the veterinary surgeon shewed that the horse had died from suffocation. The Jury found the prisoner guilty. The Chairman told the prisoner that he had been convicted of a very serious offence; and, for the protection of the public, he was bound to inflict a severe punishment. The Court, therefore, sentenced him to transportation for fifteen years.

The *Courier de l'Aix* states, that butchers' meat has become so dear at Schaffhausen, in Switzerland, that permission has been granted by the authorities to expose for sale the flesh of horses, asses, and mules.

DISEASE AMONGST CATTLE, SHEEP, &c.

WE regret to hear that a dire disease is now very prevalent amongst cattle in the villages round Mansfield. Mr. Baily, of Ryethorn-hill, has lost more than fifty valuable sheep, mostly ewes, in a very short time; Mr. Jackson, of Farnsfield, has lost a number of pigs very suddenly; and other losses of calves and other stock are constantly occurring in the neighbourhood.

Nottingham Guardian.

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New Series, No. 65.

LAMENESS IN HORSES.

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

[Continued from p. 186.]

NAVICULARTHRITIS.

PREDISPOSITION.—The notorious fact of the foot predisposed to navicularthrititis, or actually attacked by the disease, presenting a hoof which for normal aspect might be selected as a specimen of health, with a frog such as Coleman would have pronounced to be perfection, while it puzzles the non-professional man, is at once seized upon by the veterinary surgeon, supposing the horse to be lame of the foot, as *pathognomonic* of the nature of the case. Beholding so good-a-looking foot, and yet a lame foot, his suspicions become at once aroused, and the probability is that investigation into the cause of the lameness confirms them. Contraction has certainly nothing to do with the case; on the contrary, the foot is open at the heels, and presents a bold prominent frog, a frog that has evidently been all along receiving a full amount of pressure from the ground, and been in full play in consequence, and so has warded off contraction. Whenever contraction proves to be an accompaniment of navicularthrititis, one disease will be commonly found to be the sequel of the other, contraction of the hoof being very likely to supervene upon such favouring of the foot as the pain and lameness of navicularthrititis necessarily entails.

The contracted foot, I repeat, with its high heels, and its raised and shrunken, and perhaps diseased, frog, may be regarded as possessing a kind of immunity from navicularthrititis; and, presently, we shall perceive the reason of this. The curious correlative fact, however, is, that neither is the broad or flat foot, no more than the narrow

one, the subject of disease in the navicular joint. If pressure to the frog be—as I think I shall be able to demonstrate that it is—fruitfully productive of navicularthrititis, how comes it that flat feet, in which such pressure is remarkable, should be exempt from or insusceptible of it? The answer to this question is, that such is the normal thinness or weakness of the horn of such feet, and such their consequent properties of yielding and elasticity, that pressure and contusion from the ground upon the frog is thereby, in any injurious effect it might have, counteracted, the frog not being under such circumstances rendered inexpandible or liable to become a hard fixed body the same as in the navicularthritic foot. For let it be here observed, that exposure of the frog alone, *frog-pressure* as it is called, is not, of itself, sufficient for the production of navicularthrititis; there must be present *rigidity of the hoof* as well, soft and elastic horn, as I said before, defeating the mischief pressure to the frog would otherwise be likely to entail.

The foot predisposed to take navicularthrititis—the one indeed we might, *à priori*, imagine would become the subject of the disease—is the strong, round, short-toed or clubby foot, open at the heels, with a sound frog jutting prominently out between them. Here is a frog exposed to all the pressure Lafosse or Coleman would have desired for it, bounded at its sides by heels thick and strong, and indisposed to yield, and itself liable from its very exposure to become, in the warm stable, hard and dry, and incompressible. Pressure from the ground upon such a frog must render it in effect a fixture; it cannot, will not expand; and at the very moment pressure from below would force it upwards, weight from above is with more or less violence descending upon it. Under such circumstances, can we wonder that the delicate synovial lining of the navicular joint should become crushed and broken? Rather, is this not the very way in which, when we come to reflect upon the matter, we should suppose such a lesion would be most likely to happen?

But, if exposure of frog and rigidity of hoof prepare the foot for taking the disease, how happens it that navicularthrititis does not occur in the hind feet?—which, we believe, it never does. It is very well known that the fore feet are liable to many diseases to which the hind are hardly if at all obnoxious, and navicularthrititis constitutes a most important ailment in this catalogue. The weight of the head and neck, in addition to that of half the body, upon the fore feet has been adduced by way of accounting for this; also concussion, &c. has likewise been mentioned; but, the real fact of the case is, that the disease—or one precisely analogous to it—*does* occur in the hind as well as the fore limb, though not in the foot, but in the hock joint. *Articular spavin* to all intents and purposes

consists in the same pathological lesion as does navicularthrititis : a fact that will serve to cast additional light on the etiology of both diseases. Still further light is derived from the superadded fact of the knee joint being occasionally affected with the same disease. In fine, there is no joint of the limbs, nor hardly any synovial structure in them, but what is liable to acquire, under fitting circumstances, a like disease.

It will not appear strange that the navicular joints of the hind limbs should exhibit no such disease as so frequently invades the same joints in the fore limbs, when we come to consider the difference of function, in progression, performed by the fore and hind extremities. While the former are little more than props of support, and for that reason have their bones ranged in the form of upright columns, the latter have their bones obliquely placed, thereby constituting, one with the other, so many obtuse angles, to the end that by forming powerful levers, and affording every advantage for action to the muscles attached to them, they may be fitted for the grand purpose of propulsion of the body onward. Any injury sustained in action by the upright column—the fore limb—will originate in jar or concussion, aggravated by the moving weight superimposed upon it ; whereas, any injury that may accrue to the hind limb will arise from the stress imposed upon the several levers and angles at the moment progression is being effectuated, the principal axis of which movement being the hock joint, that, as might be expected, will be the part to feel any inordinate weight or force of action. The navicular joint fails in the fore limb, then, simply from the circumstance of being the nethermost joint of the column—the last to receive the shock from above, the first from below ; and the hock in the hind limb is the joint expected to fail, because it is not only situated so as to receive the brunt of the shock, which in the fore limb descends down the column, but has likewise, to sustain the weight of the body and its burthen, at the time force is employed in their impulsion onward, even while in state of motion. Joints appear to sustain more harm from shock or concussion, caused either by imposing great weight upon them while in action or by high or sudden descent of movement, than from hard or continued work ; and we shall universally find that those of the fore or hind extremity suffer most, in particular the navicular or hock joints, according as they have respectively been the most called into action. We see this exemplified in hunters, racers, chargers, hackneys, carriage or coach horses, &c. It is an axiom in practice with every veterinarian of experience, that lameness in the fore limb has for its ordinary seat the *foot*, in the hind limb, the *hock* ; and, as we have seen, when we come to reason physiologically on the subject, science completely

bears us out in accounting for these apparently opposite localities of lameness.

But why should not the *coffin* suffer as well as the navicular joint, that entering equally into the construction of the pedestal of the column of the fore limb? This shews there must be something more, besides the circumstance of its nethermost situation in the column of support, to account for the navicular joint being so frequent a seat of injury, while the coffin is, in fact, a part rarely diseased. And I cannot, myself, satisfactorily account for this but on the principle of frog-pressure, or, rather, frog-contraction. The facts already stated, of navicularthrititis having become so frequent a disease since frog-pressure became so fashionable in the practice of shoeing, compared to what we have reason to believe it was before, and of its invariably happening in feet presenting sound prominent frogs, militate more strongly in favour of this opinion: at the same time, there may be something in causation ascribable to the circumstance of the navicular *joint*, as we denominate it, being one which owes its formation to the main tendon of the fore leg in connection with bone. We know that one of the uses of the frog is to serve as a stop or stay to the foot; and where horses in action are suddenly pulled up, or in their descent from leaps have to sustain themselves by firm footing upon the ground, they throw themselves at once upon their heels and frogs, and in such efforts and shocks, no doubt, frequently do mischief to the navicular joints, and particularly when their hoofs, from standing in the stable or lack of moisture, have become hard and dry and inelastic. In the act of standing for any length of time, and in any efforts that may be required to sustain that posture, it would be the coffin-joints, were it not for the *laminæ*, that would suffer; whereas, the former being relieved from pressure as well as concussion by the latter, we find horses that are compelled to fatiguing efforts of standing, particularly in warm situations, not contracting disease of the coffin-joint, but of the *laminæ*—*laminitis*, or “fever in the feet,” as the malady is called; and this is a complaint which on many occasions has proved epidemic, and on board of ship in particular.

Although predisposition may, and probably does, exist equally in either foot, it is a rare circumstance for a horse to be attacked with navicularthrititis in both feet simultaneously, as rare as it is for laminitis to be known to confine its attack to one foot. This difference between two diseases affecting the foot admits of ready and satisfactory explanation in the fact of the one having the exciting cause applied equally to both feet, while in the other—navicularthrititis—the excitant will rarely operate but in one, either from the circumstance of one foot being commonly made freer or stronger use of than the other, or from the application of the cause

being commonly but to one foot. Most horses, from the habit of leading in cantering or galloping with the off foot, exert the off limb in action more than the near; and I find, on referring to my register, occurring in a given period of time, a proportion of ninety-three cases of lameness in the off fore foot to seventy-six in the near foot.

THE EXCITING CAUSES of navicularthrititis will for the most part be found under the heading of what we denominate "work;" a fact all our experience but tends to confirm, the simplest result of observation being, that where most work is done there we find most horses lame in the navicular joints. At the same time, this general cause of the mischief will be more or less operative, as regards navicularthrititis or any disease in particular, accordingly as the kind of work the horse performs, the kind of foot he is possessed of, and the mode in which such foot is pared and shod, favours the approach of this or that disease. That navicularthrititis may occur on a sudden, without there being any work in the question, from some mis-step or false step, some spring or jump, or leap or stumble, there is ample evidence to shew. A horse shall come fresh and sound out of his stable, make a stumble or a jump, and all at once fall dead lame: examination of the limb is immediately instituted; nothing is found in the foot or elsewhere to account for the lameness, and the case at length turns out to have been from the first navicularthrititis, or at least such lesion as is certain to lead thereto. This, it is true, may be regarded as an incidental occurrence. A tolerably certain way, however, of producing the disease would be to take a horse with a foot predisposed to it, and especially with one susceptible of it from having had the disease before, and give him a rattling trot or gallop upon a hard road, or take him for a day's hunting, and over such a country as Surrey, where flints meet his foot at every step.

In cavalry regiments, where the work of the horses is at times and seasons only such as can be called hard or trying, and that mostly during the summer, lengthened and accurate observation has shewn that cases of foot-lameness are more prevalent during such working periods and seasons, and most of all prevalent in months when the ground upon which they exercise may be expected to be dry and hard. Looking back a period of eighteen years in my own regiment, I find recorded in the time 239 cases of "lameness in the foot," supposed to be navicularthritic. Dividing this period of eighteen years into two of nine each, I find but 71 of such cases occurred during the first half period; 168 occurring in the course of the second: a circumstance to me accountable for on the score of there having been a smaller remount of horses in the former, as well as of the regiment having performed not only a less amount of work during the time, but that work consisting in slower

and more regulated paces. Furthermore, distributing the whole number of cases—239—under the heads of the several months of the respective years in which they occurred, I find a very large proportion happening during the working months; there being as many cases registered, on an average, during March, May, June, and July, as during the remaining eight months altogether. Some trifling diminution has appeared in the month of April, perhaps owing to the general showeriness and consequent wetness of the ground in that month. The prevalence in March has evidently owed its rise to the relapses—cases patched-up during the winter—giving way again in the spring, as soon as work came to be renewed. In one of our cavalry regiments, owing to an inordinate course of field-day drilling, there existed at one time as many as 30 per cent. of their horses lame, and most of the cases were evidently navicularthritic. We may therefore safely set down *work* as a grand excitant of navicularthrititis.

A vulgar saying amongst horse-folks is, that “it is the pace that kills:” as veterinarians, we might with truth say, “it is the pace that *lames*.” We shall ever find most lame horses in situations where the feet are battered upon hard or stony ground; though such battering will not, as observed by me before, operate with the same destructive effects where there does not exist the same predisposition or susceptibility to take the disease, or rather where its mischievous operation is—unwittingly, I believe—guarded against by paring the foot and by shoeing. Nimrod—the late Mr. Apperley—during the eight years he resided in France, from observations made on horses in his own neighbourhood, as well as from what he had seen in the course of his travels through France, was led to exclaim—“How rare lame horses are in France; those lame in the feet especially!” sagaciously ascribing so remarkable a difference between the horses of France and those of our own country “to the comparatively slow pace at which French horses travel;” although a friend of his (Nimrod’s) “a clever mechanic,” felt inclined to attribute the evil to differences between the French and English methods of shoeing horses: “depend upon it,” his friend would say, “the French system of shoeing contributes much to their soundness, as far as the feet are concerned, by the superior method of *nailing*.*” For my own part, my explanation of the fact—for fact and truth it appears to be—is, that, frog-pressure being a grand cause of the evil, in France they get rid of this not merely by paring the frogs away more than we do, but by protecting them afterwards by thick strong-heeled shoes; so that while the frog of our English-shod horse is battered upon the road and struck against every stone it meets with, the frog of the

* See Nimrod’s Account of Comparative Disease among English and French Horses, in THE VETERINARIAN for 1839.

French-shod horse is furnished with a couple of stout lateral defences, between which it is raised up out of the way of blows and pressure. At the same time, I believe that a dry and hard, or "rigid" hoof, and, in particular, a rigid frog, materially adds to the danger of having this disease produced: the elastic hoof and spongy frog, in the flat weak foot for example, yielding under the infliction of blows and pressure, so as for a length of time, for always, perhaps, to counteract any harm that might accrue from their being fixtures, and which, I believe, does result from that circumstance. I am of opinion with Mr. Turner, that an "evil" accrues from keeping horses standing so many hours in the stable, and from the irregular work they are in consequence apt to be put to; and this evil, I repeat, mainly consists in the hoof, during that time of confinement in the warm stable, acquiring a *rigidity* which unfits it for yielding under pressure simultaneous both from above and from below; and the consequence is, or is likely to be, bruise or lesion, or irritation excitive of navicularthrititis. And this I should take to be the usual or common way in which this tristful disease has its beginning.

CHRONIC BRONCHITIS, WITH DILATATION OF THE HEART AND CARDITIS, IN AN AGED MARE.

By —————*, *Jersey.*

THE present case is the last of five which has fallen under my notice since my residence in this island (Jersey). She was a light grey cart mare, of handsome shape, the property of G. De St. Croix, Esq., a native resident. This gentleman purchased her about four months ago, a little touched in her wind, as was supposed, she having at that time cough with hurried respirations: so little was she affected by it, that labour seemed rather pleasure than pain to her.

I was summoned to attend at the farm, which is a couple of miles from town, on the 2d of last month (March), to see the grey mare, which was said to be off her appetite, and *blowing hard*.

The symptoms which presented themselves to my view were these: viz. hurried and rather laborious breathing, numbering twenty-four per minute—often sighing—breath warm—mucous membranes a little injected—nostrils slightly dilated—pulse 52, but of a character not easily described: it was neither a quick, hard, full, nor wiry pulse, but one of a languid, irregular, dragging-on (if I may be allowed such a term) character, denoting evidently not merely functional but structural disease of some important viscera of the chest (it was not of an inflammatory state, by any means).

* The writer has not affixed his name.

Heart's action distinctly audible on both sides of the chest—the blood fluttering through the jugular veins at the bottom of the chest—ears and legs warm—fæces natural—urine in moderate quantity, but white—respiratory murmur normal, with the exception of a mucous noise at the bottom of the trachea and commencement of bronchial tubes—cough—loss of appetite—ears watching—head hanging over the manger as if listening to something. The mare has not lain down for three or four days or nights.

Diagnosis.—Chronic bronchitis, with a probability of the heart being implicated. Introduced a seton in the chest, and administered the following bolus that day: R Camphor ʒij, ant. pot. tart. ʒss, hyd. chlorid. ʒss, aloës B. ʒiiss; to have chilled water and bran diet. Discontinue hay and oats.

3d.—Much the same: will eat nothing, and dislikes moving round in her stall. Gave spt. æth. nit. ʒij, liq. am. acet. ʒviij, pot. nitrat. ʒij, in aquâ.

4th.—Symptoms much the same as yesterday, except that the appetite is improved—seton doing well. Repeated the ball, *sine* aloë., the fæces being softer.

5th.—Pulse gone down to 48 beats per minute, respirations quieter. Repeat medicine.

6th.—Mare seems exhausted, requiring a stimulant. Gave ammon. sesquicarb. ʒiss, ex aquâ.

7th.—Much improved with respect to her spirits; but other symptoms have shewn themselves: pulse 48, with intermissions every five beats, coupled with the same character as above described: obstinate standing position, feeds tolerably. I made up my mind to withhold medicine for a day or two, and informed the owner of my apprehensions. This sort of thing went on up to the 12th, when the heart's action was somewhat altered, viz. to intermit every two beats. One day she would seem very lively, and the next dull, her appetite being as uncertain as her spirits: not much cough, neither is the mucous rattle heard at the bottom of the neck. Her legs have not yet swelled, neither has she ever evinced pain upon pressure or otherwise.

13th.—Pulse intermits every other beat—fæces hard. Contrary, I believe, to general practice, I administered four drachms and a half of aloes, which, on the

14th,—Never had any effect, but the pulse has now assumed a character very much the same as when I was first called in. The breathings are carried on with a jerk, which I have generally considered (when associated with some others) as a bad omen. The mare still standing; cough seems to have left her for the present. Discontinued treatment, but kept watching her symptoms up to the

19th,—When I found she was coughing much, the weather, no doubt, being the cause of it, as it rained for a day or two, with

Easterly winds. Rubbed into the neck and chest two ounces of unguentum cantharidum, which, on the

20th, Had acted well, producing much tumefaction. The pulse now gone up to 50 beats, which I naturally looked for. Ears, legs, and mucous membranes, not in the least affected, except down to the knees, caused by the seton in the chest. I now left her to chance until the

24th, When she seemed to all casual observers well and hearty, the blister, and *no* medicine, having worked charms: but on taking the state of the pulse, I was still led to infer that all was not right, although it was very probable she would live some time (providing she could live and work as we do in a similar state), i. e. without excitement. She, however, went on from day to day recovering her appetite and apparently her health, and never lost much flesh, up to the 28th, when I advised that she should be put into an empty cart (she having had a few days' exercise alone), and see what effect it would be likely to have upon her; at the same time cautioning the man in charge not to work her hard, as I feared a relapse would be the result; also stating it to be possible for the mare to be useful for some time, but that probably she would sink after the first day's work. On the morning of the 30th I met the mare with another in front drawing about 15 cwt. in a low cart, which was but a moderate load; they were bound for a parish four miles distant, with a smart hill to ascend. I told the carter, in the following words, "that it would either kill or cure the mare," and bade him good morning.

30th, half past eight P.M., the man brought the mare to my infirmary at this hour, pulling violently at her halter, while another fellow had hold of her tail, pushing her along: this pulling and pushing had lasted three miles or so, and occupied, I believe, as many hours. After we got her into the stable she kept staggering and running her head up against the side of the stall and manger, very like stomach staggers, so much so that it was with difficulty I could examine her. I did so at length, and found the pulse and heart particularly fluttering and quick, with distressed but slow respirations, and eyes amaurotic. Now she would let her mouth rest in the manger, then under the manger upon the ground, all the time staggering. I examined her per vaginam, and found the bladder distended almost to bursting; this I did in consequence of a continual cocking of the tail. I removed the urine by the aid of a catheter, which seemed for a moment to give relief, and attempted to bleed, but could not obtain more than a pint of blood, and that like treacle. Considering it probable that the mare was over-marked, and at the same time feeling assured she would very soon die, I gave her a diffusible stimulant by way of experiment; but it had no

effect upon her. About twelve at midnight she fell down, but rose again in a few minutes, and resumed her former position.

About two o'clock A.M., on the 31st of March, she fell again for the last time. I sat up with her until nearly four, watching her, and then retired to rest, not thinking I could do any good. When the stable door was opened at six, she was found no more, and nearly cold:—thus ended the life of the poor brute. I examined her in the course of the morning, and found the whole of the right side of the heart dilated to an enormous size, and easily torn with the finger, with red spots upon the base of the heart; also portions of albuminous matter in the interior, shewing that, under excitement, active inflammation had set in, which was the immediate cause of her death.

Remarks.—In all cases such as the above I have noticed the following symptoms as being confirmatory of dilatation,—the peculiar pulse, pendulous head, jerking respiration, obstinate standing position, never attempting to lie down; with occasional swelling of the extremities, fastidious appetite, and the fluttering or irregular manner in which the blood is seen to pass into the chest; also continual sighing, which latter symptom is generally present, particularly towards the last. A mare which I once attended was carried off with diarrhœa.

Jersey, April 7, 1847.

HINTS FROM A SUBSCRIBER.

Sir,—It has often occurred to me, and, no doubt, also to you, that, in cases of severe strain of the back sinews in a horse, his pain would be greatly modified by applying a high-heeled shoe, made on the principle of a sandal shoe, over his common shoe, instead of jarring his suffering limb by taking off the common shoe to put on the high-heeled one*. If you consider this suggestion of any value, it might be made generally known through your Magazine. Another means of mitigating the suffering of animals is the practice of clipping long-coated dogs in summer, and yet (by means of a half-inch thick steel comb slightly curved) leaving enough hair to preserve their beauty.

Your obedient servant,
A SUBSCRIBER.

Granada, 12th March, 1847.

* The substitution of a high or thick-heeled shoe for the common shoe is our constant practice; nor does the unnauling and nailing give that pain or do that mischief which our humane "Subscriber" imagines.—ED. VET.

A NEW ARRANGEMENT OF THE BLOODVESSELS.

By JOHN JACKSON, M.R.C.S E.

FIRST, OR HEPATIC VASCULAR SYSTEM.	SECOND, OR PULMONIC VASCULAR SYSTEM.	THIRD, OR SYSTEMIC VASCULAR SYSTEM.
1. <i>Hepatic Afferent Vessels</i> :—The venous portion of the spleen, and the splenic and portal vein, and its ramifications in the liver.	1. <i>Pulmonic Afferent Vessel</i> :—The right auricle and ventricle, and the pulmonary artery and its ramifications.	1. <i>Systemic Afferent Vessel</i> :—The left auricle and ventricle, and the aorta and its ramifications.
2. <i>Hepatic Capillaries</i> :—The minute bloodvessels intermediate between the terminal branches of the hepatic afferent vessel and the primary roots of the hepatic efferent vessels.	2. <i>Pulmonic Capillaries</i> :—The minute bloodvessels intermediate between the terminal branches of the pulmonic afferent vessel, and the primary roots of the pulmonic efferent vessel.	2. <i>Systemic Capillaries</i> :—The minute bloodvessels intermediate (1) between the terminal branches of the splenic artery and the primary roots of the hepatic afferent vessel, and (2) between the terminal branches of the hepatic artery and the terminal branches of the hepatic afferent vessel, and (3) between the terminal branches of the systemic afferent vessel generally and the primary roots of the systemic efferent vessels.
3. <i>Hepatic Efferent Vessels</i> :—The hepatic veins.	3. <i>Pulmonic Efferent Vessels</i> :—The pulmonary veins.	3. <i>Systemic Efferent Vessels</i> :—(1) The gastro-intestinal veins (which terminate in the middle of the trunk of the hepatic afferent vessel), and (2) the superior and inferior venæ cavæ and the coronary vein.

THE HEPATIC AFFERENT VESSEL consists of a spleen and vein; THE PULMONIC AFFERENT VESSEL consists of a heart and artery; and THE SYSTEMIC AFFERENT VESSEL also consists of a heart and artery.

The pulmonic afferent vessel causes a *constant* and *rapid* motion of the blood through the pulmonic capillaries, and the systemic afferent vessel causes a *constant* and *rapid* motion of the blood through the systemic capillaries. *What kind of motion* of the blood does the hepatic afferent vessel cause through the hepatic capillaries? It must cause *some kind* of motion. It can never be true that of the three afferent vessels two cause motion of blood

and one not. Nor can it be true that an afferent vessel, consisting of a *spleen* and *vein*, can cause the same kind of motion of blood as an afferent vessel consisting of a *heart* and *artery*. If, then, the hepatic afferent vessel does propel the blood through the hepatic capillaries, and not, as is commonly supposed, the *systemic* afferent vessel, and if it cannot cause either a *constant* or *rapid* motion, it must of necessity cause an *intermittent* and *slow* motion. The question therefore is, whether the hepatic afferent vessel, consisting of a spleen and vein, is as perfectly adapted for effecting an intermittent and slow motion of the blood through the hepatic capillaries as either the pulmonic or systemic afferent vessel, consisting of a heart and artery, is for effecting a constant and rapid motion of the blood through the pulmonic or systemic capillaries? If it is, a great enigma is solved; and *heart* and *spleen*, and *artery* and *vein*, may be regarded as ANATOMICAL ANTITHESES.

But it may be said, it is only the *venous portion* of the spleen which is the roots or commencement of the hepatic afferent vessel. What is the *splenic artery* for? and the *splenic capillaries*? The splenic artery, by dividing and subdividing, and ultimately splitting up into innumerable hair-like tubes or vessels, *forms* the splenic capillaries, and these splenic capillaries simply *furnish points of origin* for the roots of the hepatic afferent vessel. These venous roots—the true spleen—could not originate from nothing; and, moreover, they could not originate from any thing else than capillaries. And how could there be any splenic capillaries if there were no splenic artery? Venous roots only were wanted; but capillaries were necessary for them to originate from, and an artery was necessary out of which to make those capillaries. If there were no splenic artery, there could be no splenic capillaries; no splenic capillaries, no splenic veins or spleen; no spleen, no roots or commencement of the hepatic afferent vessel; no roots or commencement, no trunk and no branches; no hepatic afferent vessel, no hepatic vascular system; no hepatic vascular system, no pulmonic vascular system; no pulmonic, no systemic; no vascular system, no motion of blood; no motion of blood, no life! See, then, the utility and importance of this splenic artery: from its capillary terminations springs the hepatic afferent vessel, the first link in the great vascular chain! And why is it so large an artery? Because a large number of venous roots could not originate from a small number of capillaries, nor a large number of capillaries proceed from a small-sized artery. Again; Why is it so tortuous? Why is not the splenic artery straight like the renal arteries? Because it is not the *blood* that is wanted, but the *bloodvessel*; and the tortuosity of the artery has the effect of minimising the quantity of blood that passes through it.

Intimately connected with the physiology of the hepatic afferent vessel is the question—What becomes of the food eaten, and the fluids drunk, after they have been received by the alimentary tube? In other words, through what vessel, and into what vessel, do the fluids pass, and likewise the solids, after they have undergone fluidification or digestion? Are they both imbibed by the gastro-intestinal capillaries, and then transmitted by the gastro-intestinal veins into the middle of the hepatic afferent vessel? Or are they both imbibed by the lacteals, and transmitted by the thoracic duct into the left subclavian vein? Or do the fluids drunk take the former course, and the fluidified solids the latter?

If, before birth, the vessel which conveys the *materiel* of nourishment and growth to the fœtus—the umbilical vein—instead of going to the liver and terminating in the hepatic capillaries, like the *permanent* hepatic afferent vessel, had gone behind the liver, and, like the thoracic duct, running along the spine, had ultimately terminated in the left subclavian vein; and if, in addition to this, the thoracic duct of the adult, instead of being so much less, had been very considerably larger than the umbilical vein of the fœtus, I would not then presume to call in question the truth of the general opinion, *that after birth the lacteals and thoracic duct convey the material of nourishment and growth from the alimentary tube into the left subclavian vein.* But as such is not the anatomical disposition of the umbilical vein and thoracic duct, I venture to take a totally different view. I maintain that the fluids drunk and the solids eaten are both imbibed, the former rapidly, and the latter slowly, and not until they have undergone fluidification by the gastro-intestinal capillaries; that they then pass through the gastro-intestinal veins into the middle of the trunk of the hepatic afferent vessel; and that the hepatic afferent vessel, being contractile as well as distensible throughout, (i. e. in its roots, trunk, and branches), propels them with an intermittent and slow motion through the hepatic capillaries. I hold, therefore, that the materials of which the blood is formed, or, as I may now say, the blood itself, passes *first* through the hepatic system; *secondly*, through the pulmonic system; and *thirdly* through the systemic system. From the systemic system a small portion finds its way back again into the hepatic afferent vessel (i. e. into its extreme roots by the splenic artery, into its extreme branches by the hepatic artery, and into the middle of its trunk by the gastro-intestinal veins); but by far the larger portion passes by the superior and inferior venæ cavæ again into the pulmonic afferent vessel, and so through the pulmonic and systemic systems alternately, and for an indefinite number of times; that is, until its component particles are either deposited in some tissue, or eliminated in some secretion.

REMARKS ON VETERINARY JURISPRUDENCE, IN REFERENCE TO CRIB-BITING, IN PARTICULAR.

By WARNE RADDALL, *Veterinary Surgeon, Manchester.*

Mr. Editor,—Reading lately a number of horse-cases which have been tried at various law courts of this country, and feeling convinced that the profession is sadly, as a body, undecided in opinion as to veterinary jurisprudence, and through the glorious uncertainty of the law, or, probably, more frequently, courts are deceived by the very erroneous and conflicting evidence adduced in these cases, by which I am satisfied many an innocent party is victimized, disgraced, and, in a pecuniary point of view, injured to an inappreciable extent; for not only is the mind under these circumstances irritated, but, to defend an action, money needed to a great amount, even be the grounds of defence whatever they may; and in case of an action being lost (I am here presuming the defendant to be a dealer), what a loss does such a man experience in his trade!—for it is a notorious fact, that in courts of law popular opinion is generally strong against a dealer, although there are in the body of horse-dealers a great number of highly respectable and honourable men: the prejudice no doubt arises from the fact of there being a class of low unprincipled men, who buy and sell horses, and, with horses, their own honour and honesty also. But does that justify the sweeping clause being applied to the whole, I would ask? and certainly would for myself say, No. I have heard several respectable horse-dealers say, that they would, rather than submit to an action, compromise any case for the reasons I have just stated, viz., the loss of repute they would be liable to sustain in case of defeat, and the probability of defeat increased by public prejudice, however good their cause. In this land of supposed liberty and justice, is it not an evil that should be removed, and that as speedily as possible? I feel quite convinced that the facts I have just stated are familiar to most of the veterinarians in practice. Such then being the case, why do not the profession as a body set their shoulders to the wheel, and launch it out of the gulph in which it is now plunged? I did hope some year or two since, from this subject having been taken up by some spirited and eminent among our profession, ere this we should have had something definite for our guidance, and that we should have had the diseases of the horse classified, and respective tables arranged, shewing this so-called disease to constitute (belonging to this or that table) soundness or unsoundness, as the case might be; and in order more fully to elucidate the principle, a certain class of diseases, as well as lamenesses, should

be so arranged, as to require them to be proved to have existed for a certain space of time ; this should also be applied to vice, &c., for it is well known that many diseases of a mortal character, as well as tedious cases of lameness, arise in an extremely sudden manner. But I fear I have already spun out my ideas in a very tedious way, without touching on the subject with which I set out. To the point, therefore, crib-biting being now by the law considered as unsoundness, allow me to briefly relate a case that came under my own immediate notice. It was that of a black horse, purchased of a farmer on the 4th of July, 1843, by a gentleman, for the sum of sixty pounds, then being five years old, an excellent fencer, and great weight-carrier, intended to be hunted the following season : the said horse was warranted sound. Some time during the following week the purchaser was informed by his groom that the horse was a crib-biter, and he at once decided, if such was the case, to return him, and accordingly sent for me to examine him : on doing so, I found that the horse certainly did bite the crib occasionally, but in other respects was, in my opinion, sound, and a very desirable animal to carry his (the purchaser's) weight. I therefore advised a compromise being made between buyer and seller. This was ultimately effected, twenty pounds of the purchase-money being refunded to the purchaser, although he has frequently told me since that the horse was not worth, to him, one shilling less, and has refused upwards of a hundred pounds for him, the horse always having carried him well since, in good condition, and during the longest day never was known to flag. Where then, may I ask, is, *even now*, this animal's disease or unsoundness? I must here be allowed to differ from those in opinion who would at once pronounce every horse that is a crib-biter as unsound. I am ready to admit that certain cases do exist in which it may be accompanied by disease, either functional or structural ; but in by far the greatest majority of instances I should be disposed to view it as a *trick*, *habit*, or *vice*. In the case in question, I believe the horse acquired the trick after he was delivered to the purchaser, for he was a gross feeder, and, in the farmer's possession, was allowed a large quantity of hay ; in fact, in farmers' stables, it is rare to see the rack empty. So soon as the animal came into the purchaser's stable he was submitted to new discipline ; hay was given to him very sparingly, in consequence of which he was induced, by habit and usage, to make use of his masticatory organs some way or other : consequently he commenced nibbling and gnawing the rack and manger, until by-and-by the trick, from gratification, became a confirmed habit.

I have thus given my opinion from the history I collected. The horse was never known or seen by his previous owner or attend-

ants to bite the crib. I hope, Sir, these imperfect hints will stimulate some more able pen in the profession to establish a code of laws relative to soundness, by which the repute of the profession will be rescued from the stigma under which it is now occasionally thrown, as well as the innocent and honourable man go unpunished: if so, it will fully satisfy

Your obedient servant,

Shaw Street Horse Infirmary, 12th April, 1847.

ON THE EFFECTS OF ÆTHER.

By ALEXANDER HENDERSON, *Veterinary Surgeon to the Queen Dowager*; and W. A. CHERRY, *M.R.C.V.S.*

[Continued from page 200.]

EXPERIMENT V.—*Friday, March 19.* A brown well-bred mare, middle aged, fifteen hands high, and not manifesting any disease of the vital organs, was submitted to the action of the vapour of sulphuric æther. The apparatus now employed was a modification of those formerly used, an opening being left of small size to admit atmospheric air; six ounces of æther were put into the receptacle: the effect was soon evident, but no violence was manifested: she stood with her croup in a corner, and pressing backwards with all her force, evidently alone supported by the angle formed by the walls. After three minutes and a half inhalation, she fell with but little plunging, and lay quite still, inhaling the vapour for an equal period, after, as before, falling, not shewing sensation on being pricked, and no desire to resist on the legs being pulled about. She lay dozing for ten minutes, then got up, staggered about, but not in any great degree. The pulse before commencing the experiment was small, quiet, and a little below 40; it rose to a ratio varying from 60 to 70, according to the apparent action upon the system. After the experiment it sank to 43, and remained full, but soft, for some time after.

EXPERIMENT VI.—*March 23.* The same animal was again submitted to experiment, but on this occasion with an apparatus on an entirely new principle. From a defect in the size of the receptacle, a sufficient quantity of æther could not be introduced, and some time was expended in producing an effect sufficient to cause prostration. About twelve ounces of æther were consumed, and, had it not been for the fault before noticed, probably six ounces, or even less, would have been sufficient to cause the mare to fall;

but from the slowness of the inhalation, the full effect of depriving of sensation was not arrived at, as when pricked at different stages of the experiment feeling was plainly shewn. Neither did the pulse rise, indicating the full effect of the vapour; the eyes became rather fixed, and sleep, or apparent sleep, shewed itself; the pulse did not rise above 65, and remained voluminous and soft, as in the former instance.

These two latter experiments are of a totally different character from the four preceding; but it is shewn that, though the effect was more in accordance with that which has been stated to be produced by others through the agency of æther, two things are manifest; first, the quantity of æther that is required to produce vapour sufficient to induce a requisite degree of influence is very large; secondly, that unless a *continuous* stream of æther vapour is inhaled up to the production of the full effect of prostration, it will take a much longer time and consume a larger quantity of æther than it would in the case of a larger quantity of æther being produced at once; and this longer period of producing the full effect, is, further, not attended with any advantage to the operator or the animal: the pulse rises as high, the system suffers as much, and the effect does not appear to be of a more lasting character after it has been produced, but rather the reverse, to say nothing of the greater expense of the operation.

There is one other point which must not be overlooked, which is, that the effect of æther is *cumulative*, if applied too often, or without long intervals between; that is to say, that so great a shock is given to the system by the operation of so powerful an agent, as to render its action exceedingly uncertain in those cases in which it may be requisite to employ it more than once; for though it may not at the time of its second or subsequent exhibition shew more than its ordinary effect, yet such may be the condition of the system itself, that it may not be able to bear up against the repeated exhibition of an injurious agent, and hence not have a sufficient degree of reactive power to overcome its secondary consequences.

Another striking point is the extraordinary difference that is shewn in the nature of the action induced. In two of the animals operated on, the greatest degree of violence was manifested; in the other two not a single symptom of violence was evinced. This appears to be an anomaly, but is plain enough, if more closely examined into, and strictly within the bounds of explanation; but before we enter into this part of the question, it will be as well to shortly review the arrangement of the nervous system, and inquire which of the component parts of this important system is the one really affected by this terrific agent.

The nervous system is divided into two great divisions, and one

subsidiary division. The *brain*, the origin of the senses and of the will; the *spinal cord*, the origin of the nerves of motion, of feeling, and of the ordinary functions of life. The subdivision is the *sympathetic*, a collection of fibrillæ given off from all the nerves of the spinal system just at their origin, and also having a connexion with the brain or intellectual system.

Now each of these three divisions has certain distinct duties to perform, and the due performance of healthy action depends upon their being in equilibrium as regards each other, or the result will be "*mens sana in corpore sano*," or the reverse.

The functions of the *brain* may be considered to be intellectual, and, in a great degree, *voluntary*; the functions of the *spinal cord* are, in great degree, *involuntary*, and have been aptly named by Dr. Marshall Hall, "*reflex*," because it reflects, as it were, the power of the nervous system over the whole body. The *sympathetic* is evidently to unite these two powers, and all portions of the body into unison of action or of feeling.

It has been observed, that each of these systems must be in equilibrio; but it often happens both in men and animals, that naturally one of these has a preponderance, and in proportion as the one or the other is in excess, so will you find high intellectual power, mere animal development, or general irritability of constitution. What would indicate the preponderance of intellectual power? the greater size of the anterior portions of the brain; and the reverse would indicate the preponderance of the mere animal disposition. Temperament alone would point out the excess of the sympathetic system.

To shew that these two, the intellectual and the reflex systems, are in great measure independent of each other, a few instances may be noticed, for it is important to look to this. If life is extinguished by the sudden destruction of the brain, the body dies gradually, for excitability in the muscular fibre will frequently exist for *two* or even more hours after the death-stroke—the blood coagulates—the muscular fibre contracts, that is, stiffens—the fat becomes hard—and the process of putrefaction comes on very slowly: in fact, an animal so killed is in a state to become food for man; but on the other hand, let an animal be destroyed by lightning, by prussic acid, by being hunted to death, by the inhalation of the vapour of æther, or by any other analogous mode of death, the blood does not coagulate—the flesh does not stiffen—the fat remains oily—putrescence comes on rapidly and of a highly offensive kind, different to putrefaction in death produced by destruction of the brain alone. An animal so killed is not fit for the food of man (a coursed hare is only a partial exception); it will produce disease if used as food. A further point must be noticed; that is, if an injury sufficient to

destroy life should be inflicted upon the spinal cord, death will not ensue immediately, but will be slowly developed, depending upon the position, as whether nearer to or farther from the brain; in other words, how much of the body will be affected by it. If in the third or fourth cervical vertebra, death will ensue in a few hours; and so on, as you proceed downwards, the time becoming longer and longer; but if at or above the second cervical vertebra (as in *pithing*), death will result as quickly as from direct injury to the brain, and the result will be, as regards the phenomena, similar to those arising from direct destruction of the brain itself, though not quite so rapid, as is shewn by death from "pithing," that is, division of the spinal cord between the first cervical and the occipital bone, as by this means death ensues by the destruction of the power of the par vagum, and the brain only dies as a secondary instead of a primary process.

It will now be pretty evident that the kind of influence that æther produces over the system is through the agency of the spinal system of nerves. It paralyses or suspends the function of the cord and its branches; and if this effect is produced too frequently, or too long continued, then death will ensue, not immediate, but slowly, as shewn by that unfortunate case of the young woman at Grantham, a short time since. In proof that the spinal system is the seat of influence, we find that the mind does not become affected; the perception, both in man and animals, is evidently clear, but no power of motion; and, as a matter of necessity, the sympathetic system, from having its principal origins from the spinal cord, is put under the condition of the part from which it originates; but when the communication with the brain is large, then you see pain, or something very like it, evinced.

Now, when there is a large development of the intellectual portions of the brain, whether this be in man or animals, it will be observed that the effect of the æther vapour will be modified according as this development is greater or less, and, of course, *vice versâ* in the opposite degree of development. As regards the first condition, the animals operated on in Experiments 2, 3, and 4, are illustrative in a marked degree, as external configuration plainly indicated; the reverse was shewn, both by outward configuration as also by the fact itself upon trial, in the animals operated on in Experiments 1, 5, and 6; also Experiments 3 and 4 exemplified the excess of sympathetic influence, as shewn by the great irritability of the animal, and was, in reality, the cause of death.

There is one peculiarity from death by æther, that is, the striking violet-purple-black colour of the blood. This, no doubt, arises from the presence of an excess of carbon, which exists in so large a

quantity in the æther, and must of necessity be absorbed; further, death resulting from injury to the spinal cord, if not too long in being induced, also produces this singularity.

It must be remarked, that those causes of death which act immediately upon both brain and spinal cord, and at once extinguish life, are all marked by the phenomena of non-coagulation of the blood, by non-contraction of muscular fibre, by the not hardening of fatty deposit, and by rapid and peculiar decomposition.

The only conclusion to which these researches lead is, that as a means of tranquillizing an animal so that an operation may be performed without resistance æther is not strictly admissible, it would, in all probability, so act on the general system as to have an injurious effect on the subsequent well-doing of the animal; but another very important question arises, whether these very circumstances which are incompatible with its use in one way, may not prove of the highest value as a remedial agent when its merits and the power of regulation may be better understood.

We are, &c.

April 14, 1847.

ADDRESS TO THE VETERINARY PROFESSION.

By W. ARTHUR CHERRY, *M.R.C.V.S.*

“None are so invincible as your half-witted people, who know just enough to excite their pride, but not so much as to cure their ignorance.” ANON.

* * * * *

“Chance will not do the work—chance sends the breeze;
But if the pilot slumbers at the helm,
The very wind that wafts us towards the port
May dash us on the shelves. The steersman’s part is vigilance,
Blow it rough or smooth.”

OLD PLAY.

IN once again addressing my professional brethren, I do not mean to insinuate that any amongst them are not as capable as myself to form correct opinions on the fitness of measures that may be propounded for the benefit of the profession at large; on the contrary, no one can feel greater reluctance to obtrude individual opinions than myself; but there are times and circumstances when such feelings must yield to the impression that to abstain would be injurious to the common weal.

Being placed, from a variety of circumstances, in a position where the knowledge of the various movements and actions of

conflicting parties has been easy of attainment, I am enabled to arrive at conclusions, which otherwise would be beyond my mark.

The time for action is at hand; not as shewn by the effects of individual opinions clashing together, but where feelings must prompt actions in unison with each other; for unless we, as a body, can act together, and shew to those in power, and who have granted our prayer to be recognized as an integral portion of the social community, that we are capable of managing our internal affairs in concord and with advantage, all the steps hitherto gained are as nought; for it is an axiom of the divine Law-giver, that a house divided against itself cannot stand; it is not a question of a pecuniary nature that has now to be discussed, but one of simple unanimity.

I must again advert to by-gone times, not in reproach, or with any angry feelings, but as a beacon to warn us from placing reliance on the quicksands which have hitherto swallowed up the various attempts which have been made to bring about a better position for our unfortunate art.

Various attempts had been made during the earlier part of the century, but not in sufficient force to attain an object so desirable. Somewhere between the years 1826 and 1829 a much stronger attempt was made, and some leading points were gained, and all seemed to shew that matters were in a fair train for attainment; but, alas! the intemperance of a few, and the endeavours on the part of others to gain too much, and the violence of the first party, who, finding that they could not have wholly and solely the ruling of every thing, turned the scale against the attainment of a single point. Nay, more, the seeds of dissension were sown, and the union of those who had made the endeavour soon felt the influence of such proceedings, and the efforts ended only in abortion. For some years nothing was attempted; but again others took up the question, and, proceeding in a better course, matters were laid on a surer foundation, and before any thing was attempted, the question was openly put to the Royal Veterinary College, as to whether *they* intended to take steps to obtain a Charter of Incorporation for the veterinary body: the answer was a negative. Here was a blank; but it was not to remain; for, finding that no co-operation was to be looked for from this quarter, other independent steps were taken, and, having the means of ascertaining the opinions and feelings of some of the highest in the government of the country, a memorial was prepared, and presented to Her Most Gracious Majesty. Finding that such steps had been taken, the Professors now thought it time to take part in the movement, and by overtures on their part, and by a promise to pay the extra charge which would accrue from having their names inserted in the memorial, their

names were inserted in that document as petitioners for the granting of a Charter of Incorporation.

But, from avowals which these parties have since made, they looked on the successful result of an application to her Majesty as a point not by any means likely of attainment, or they would not have allowed their names to be so placed : to their great surprise and dismay, the prayer of the petitioners was granted, and the power of regulating the affairs of the body corporate was vested in the hands of the body itself.

Now commenced the series of attacks which have since become so painfully well known. Do not let us deceive ourselves on this point. On the 8th March 1844, the Charter became a veritable legal document, and I have letters in my possession, dated in the following month of April, stating, in plain terms, the onslaught that was to be commenced, and, in part, who were to be the parties to do it. It is not requisite that I should give a more minute detail; sufficient is it, that the result has proved but too correctly the avowal.

Petitions have been sent in to the Government, insinuations, aspersions of individual character, false charges of fraud and deception, which have since been obliged to be withdrawn even with humiliation by the parties who promulgated them, have been made; boastings of superiority have been loudly bruited in every direction, and with all this the Government and the public have been attempted to be cajoled.

For more than two years this was borne with, thinking that something like open, manly honesty would ensue upon calm reflection; but the more there was forbore, the greater the clamour; until, at last, measures beyond those merely defensive were, from necessity, obliged to be resorted to. So soon as this was done, affairs took a different aspect; and what had been so long talked of evaporated in smoke, and the clamour which had so long been rife turned into sullen silence.

During this contest of clamorous threats on the one part and forbearance on the other, every attempt that was consistent with manly prudence was resorted to, to bring about a better feeling on the part of the opposition: points that were deemed obnoxious were offered to be conceded, good fellowship was tendered; but in vain. Kindness and courtesy were met by personal abuse, scurrility, and threats; and thus those who might have had all reasonable objects by acting with the common courtesy of society, have met the fate of the dog in the manger.

In reviewing this simple detail of facts, it must be apparent that those who have acted so once will again so act, give them but the power; and it is useless to attempt conciliation with those who

have shewn such a determined resolution not to accept it, when so freely and frequently offered. There is a time when men become weary of making offers which are always met with a negative; and it is exceedingly derogatory in a large body to continue to make offers to those who, after all, are depending upon the very parties who have the power, if they so will it, to supersede them.

Again must I raise the voice of warning. The country is calling loudly for a better instructed class of practitioners in cattle pathology: look around you, and see what is doing. Agricultural schools are springing up like mushrooms throughout the country. Not only is agriculture taught, but practical veterinary surgeons are engaged to teach the veterinary art to the pupils—ay, far better than is taught in the professed schools. It does not require the wisdom of a Solon to foresee that each of these pupils, when he takes his place in the agricultural community, will become a rival on a greater or less scale to the veterinary practitioner: this is no chimerical view,—it is a plain simple truth.

Nor can we blame the agriculturists for the step they are taking; it is one of self-preservation. For nearly sixty years have they waited for the school which they established to produce that which they needed. In vain have they waited; and, finding this, they have taken the matter into their own hands, and will, if we do not mind what we are about, throw us entirely on one side.

The number of members who have emanated from the schools, including those who practise with and those without certificates or diplomas, does not probably exceed two thousand; while the wants of the community call into existence, in various grades and by various names, possibly not far short of fifteen thousand; of which, in all likelihood, nearly two-thirds are employed in cattle practice, a branch which is all but in name entirely neglected.

Now the question arises, How is this state of things to be remedied? The answer is very simple,—By unity of purpose—by maintaining in all its integrity our Charter of Incorporation—by activity and vigilance—by causing our future members to be taught that which is imperatively shewn to be requisite—by avoiding the counsels of those who are not of the advancing party—by openness, straightforwardness, and integrity of purpose—and, above all things, by the union, co-operation, and amenity of our entire body. Let us act as men; and, if we are to be thrown into the shade, let us have the consolation of reflecting that we have done our duty in that state of life in which it has pleased Providence to have placed us.

Nothing is impossible that is just; difficulties are but playthings, if properly met.

Believing that what is well meant will be as kindly received; and with one wish, one desire, to see an art to which I am devotedly attached flourish and take its true standing in the social community,

I remain, in all sincerity,

Your well wisher.

April 12, 1847.

CASE OF RUPTURE OF THE DIAPHRAGM IN A HORSE.

By WILLIAM PERCIVALL, M.R.C.S., and V.S.

October 7th, 1846.—A HORSE, ten years of age, and otherwise in apparently perfect health, was brought to me on account of having, in the course of the past night, injured one of his fore legs, by having, as was supposed, coiled the chain with which he was tied up around it. The injury appeared of so trivial a character that I simply ordered his leg should be fomented, occasionally, after walking exercise, which was directed to be given again in the afternoon.

At six o'clock P.M. accordingly, he was again taken out of his stable for exercise; which, as in the morning, was given by the man riding him, and leading in hand by his side another horse. He had walked three or four hundred yards without attracting any particular attention, when suddenly the man found him falter in his step, which was quickly succeeded by reeling in his gait, and ultimately falling upon his side. The man, although he threw himself off the horse's back, narrowly escaped having his leg crushed against the ground: as it was, the heel of his boot got wrenched off in the fall.

POST-MORTEM EXAMINATION, made the following morning:—It was evident that some consummation, either of disease or injury, had taken place in his inside to occasion his sudden death, and we all felt anxious to learn what it was. Conjecture was just as likely to be wrong as right, there being no sufficient grounds to build up any guess or theory upon. The cavity of the abdomen was laid open by the excision of a large circular flap of the parietes, exposing the cæcum and colon in a perfectly healthy condition. No sooner, however, was the great arch of the latter turned out from its repose against the diaphragm than the cause of death at once became manifest. There was a rent in the diaphragm large enough to ad-

mit a man's head through it. The laceration extended in a horizontal transverse direction from right side to left, within a hand's breadth of the sternum and cartilages of the ribs, and was most conspicuous opposite to the stomach, where, indeed, it had the appearance of having commenced. And what seemed to corroborate this supposition was the distended state of the stomach with gas; though this, of course, might have happened after death, so many hours having elapsed before the post-mortem inspection was made. There was another circumstance present which appeared to have been indirectly connected with the rupture in the diaphragm, and that was hypertrophy of the heart; it weighing eight pounds twelve ounces. A third circumstance favouring the giving way of the muscle on any extra effort being made, was the general state of obesity in which every part and organ where about adeps ordinarily is deposited was found.

REFLECTION ON THE CASE led me to consider that causes unworthy of notice in a general way deserved to be inquired into here, on account of the predisposed condition to rupture of the diaphragm in which the horse, with his distended stomach, hypertrophied heart, and obese state of body, evidently appeared to be; and therefore it was conjectured that any struggles or efforts at disengagement he might have made at the time that his leg was over the bail or chain might have produced the rupture; the reason of his not falling dead at the time being that the rent in the diaphragm was at first but a small one.

Another way of accounting for the rupture was, that his tympanic stomach causing a fit of colic, and the pain of the attack of colic being the cause of his faltering in his step and dropping down, the laceration of the diaphragm happened in the fall, causing his death in five minutes afterwards.

The hypertrophy of the heart did not appear to me to be such as to occasion any material interference with or alteration of its functions, much less to have any thing further to do with the death of the animal than in some such manner as I have ventured in theorization to suggest.

REPORT TO THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS

FROM THE COMMITTEE APPOINTED TO COLLECT AND ARRANGE
MATERIALS PREPARATORY TO THE PUBLISHING OF A NEW AND
CORRECT REGISTER OF MEMBERS.

THE Registration Committee, in making a report of the result
of their labours, have to state,

That the following Circular has been issued :—

Sir,

Rolls Buildings, Fetter Lane, Sept. 1846.

The registry of the members of the Royal College of Veterinary Surgeons being found to be very imperfect, and the College having admitted many new members the addresses of whom are not known, the Council of the Royal College of Veterinary Surgeons have appointed a Committee to collect information and arrange the same, preparatory to the publication of a new Registration List.

Such information as you may be able to furnish under any of the following heads will confer an obligation on the Committee.

The object of the following inquiries being the protection of the certified members, and the removal of the liabilities under which they at present labour (an application to Parliament for this purpose being in contemplation), as well as the improvement of the Registration List, a speedy answer will oblige.

I am, Sir,

Your obedient servant,

W. ARTHUR CHERRY,

Hon. Sec. to the Registration Committee.

1. Your Christian and Surname at full length ?
2. Your Residence ?
3. The Date of your Diploma ?
4. Whether you graduated at the London or Edinburgh College ?
5. Do you know of any M.R.C.V.S. who has lately changed his Residence ?
6. Do you know of the Death of any M.R.C.V.S. that has taken place recently, or within ten Years ?
7. Will you state the Names and Places of Residence of such M.R.C.V.S. as live in your Neighbourhood ?
8. Are there in your Neighbourhood any Persons calling themselves "Veterinary Surgeons" who have not received a Diploma ?

9. Whether such Persons (if any) have ever studied at either of the Colleges of London or Edinburgh, or have been brought up from their Youth in the Practice of Farriery?

That seven hundred and fifty of these circulars have been issued; that is, to all those whose addresses have been positively known.

That twenty-one have been returned from the Post Office, from the parties addressed not being known, or as being dead.

That four hundred and twenty-five have been duly returned, carefully filled up.

That three hundred and four have not been taken any notice of.

That every application made for circulars has been rigidly attended to.

That from those circulars that have been returned a mass of statistical matter of the greatest value has been attained; and, from the returns having been made from all parts of the United Kingdom, the following results are shewn:—

That the certified members are but thinly spread over the kingdom.

That the number of those who *assume* the title of Veterinary Surgeon exceeds the number of certified members.

That under the various denominations of *horse-doctors, horse-surgeons, farriers, cowleeches, cattle-doctors, castrators, spayers and gelders, charmers, spell-workers, butty-colliers, water-doctors*, and various other local appellations, those who gain a livelihood by the practice of the art far exceed the two other classes combined; and this, too, *without including* chemists and druggists who advertise to prescribe and make up nostrums, or proprietors and vendors of quack medicines; or butchers, coachmen, grooms, jockeys, ostlers, carters, colt-breakers, bailiffs, herdsman, shepherds, and others, who pretend to “doctor” the stock under their immediate care.

That those who *style themselves* Veterinary Surgeons, and those under the various denominations beforementioned, taken together, the numbers may be safely estimated at somewhere about *six thousand*, while the certificated members do not, as far as the Committee can judge, exceed *fifteen hundred*.

That thus there are, at the lowest estimate, *seven thousand five hundred* who practise the veterinary art as a livelihood.

That, in those districts where cattle are numerous, the number of the lowest class of the unqualified particularly abound.

That it also further appears that the cattle practice is the strong hold and chief maintenance of the lowest and most ignorant class of the untaught.

That those who *assume the style* of Veterinary Surgeon appear

for the most part to more particularly attend to horses, and are to be found in the greatest number in thickly populated districts, or where horses are numerous.

These facts, therefore, shew some very important points :

That the want of veterinary practitioners is extensive.

But another point is also proved, *viz.* that unless those who are hereafter destined to become practitioners are properly qualified to *treat* the various maladies to which not alone *horses*, but *cattle*, *sheep*, and *swine*, are liable, the unqualified and untaught will still retain their places.

It is also further shewn, that the manner in which the education of veterinary surgeons has been heretofore conducted is very faulty, and calls loudly for revision.

The Committee have deeply to regret that their labours have not produced a larger number of returns ; but though they regret this, they must state that obstacles have been thrown in their way from sources whence they ought not to have received them : the Committee deplore this the more, because this has arisen in quarters the best circumstanced to give an amount of assistance of the greatest value.

The Committee have also to regret that so large a number of certificated members should not have responded to the requisition, as it renders it impossible for the Committee to place the names of such parties in their proper places, as, from the great incorrectness of lists at present existing, it is not possible for the Committee to prove the justness of the entries previously made ; the Committee are, therefore, under the necessity of placing all such in the improved list, and for the correctness of which the Committee cannot be answerable.

Founded on these data,

The Committee beg leave to suggest to the Council the propriety of not printing and publishing any authorised list for the present, as the Committee hope, by a continuance of their labours, to have a much more perfect one ready ; as, from the number of names of practitioners stated to be certificated members which have been sent in by those who have duly filled up returns, a large accession of names will be received, so soon as such parties can be classified, arranged, and circulars duly forwarded ; which work is rapidly progressing, and the returns from which it will not be possible to obtain in less time than two or three months.

The Committee have also to suggest, that every means be put in operation to attain as large and correct returns as possible, and that the subject receive especial notice at the General Meeting in furtherance of the same object.

At the same time the Committee beg leave to return their best

thanks to those gentlemen in various parts of the kingdom who have, unsought, proffered their assistance; as also to those who have furnished returns so full of valuable information.

By order of the Registration Committee,

(Signed)

W. ARTHUR CHERRY,

Hon. Sec. to the Registration Committee.

REVIEW.

Quid sit pulchrum, quid turpe, quid utile, quid non.—Hon.

A JOURNAL OF RESEARCHES INTO THE NATURAL HISTORY AND GEOLOGY OF THE COUNTRIES VISITED DURING THE VOYAGE OF H.M.S. BEAGLE ROUND THE WORLD, UNDER THE COMMAND OF CAPT. FITZ ROY, R.N. *By* CHARLES DARWIN, *M.A., F.R.S.*

* * * This review was written by our lamented late colleague, Mr. Youatt, some time—we cannot say how long—before his death, and, no doubt, was intended for publication at the time. Circumstances intervened; and but now that appears which ought long ago to have been in print. We had thought of putting the MS. aside, as out of date. Still, we felt that the readers of THE VETERINARIAN would welcome, even out of season, a production—the last probably—from that pen which once delighted and instructed them; and so, at length, we came to the determination to publish it.—ED. VET.

THIS is one of the most interesting researches of modern times. I know not any thing of its kind that is comparable to it. The natural history, the zoology, and the geology of the work cannot fail of possessing considerable and close attention from the general reader. The work is calculated for both popular and scientific readers. We have an account of the zoology of the fossil mammalia, by Professor Owen—the living mammalia of Waterhouse—the birds of Gould—the fishes of Jenyns—the reptiles of Bell. As for * * *, he displayed many illustrations—in the language of Darwin—of his “never-tiring zeal in the cause of humanity,” and for the removal of pain from the various animals that came under his care.

We will first take a rapid sketch of the shepherd's dog.

"When riding," says Mr. Darwin, "it is common to meet a large flock of sheep guarded by one or two dogs, at the distance of some miles from any house or man. I often wondered how so firm a friendship had been established. The method of education consists in separating the puppy from the bitch while very young, and in accustoming it to its future companions. A ewe is held three or four times a-day for the little thing to suck, and a nest of wool is made for it in the sheep-pen. At no time is it allowed to associate with other dogs, or with the children of the family. The puppy is now castrated, so that, when grown up, it can scarcely have any feelings in common with the rest of its kind. From this education it has no wish to leave the flock; and just as another dog will defend its master, so will these the sheep. It is amusing to observe, when approaching a flock, how the dog immediately advances barking, and the sheep all close in his rear, as if round the oldest ram. These dogs are also easily taught to bring home the flock at a certain hour in the evening. Their most troublesome fault, when young, is their desire of playing with the sheep, for in their sport they sometimes gallop their poor subjects most unmercifully.

"The shepherd-dog comes to the house every day for some meat, and as soon as it is given him he skulks away as if ashamed of himself. On these occasions the house-dogs are very tyrannical, and the least of them will attack and pursue the stranger. The minute, however, the latter has attacked the flock, he turns round and begins to bark, and then all the house-dogs take very quickly to their heels. In a similar manner a whole pack of the hungry wild dogs will scarcely ever (and I am told by some never) venture to attack a flock guarded by even one of these faithful shepherds.

"The whole account appears to me a curious instance of the pliability of the affections in the dog; and yet, whether wild or however educated, he has a feeling of respect or fear for those that are fulfilling their instinct of association."

THE BREAKING-IN OF WILD HORSES IN CHILI is an interesting sketch as depicted by Mr. Darwin. "One evening a *domidor*—a subduer of horses—came for the purpose of breaking-in some colts. I will describe the preparatory steps, for I believe they have not been mentioned by other travellers. A troop of wild young horses is driven into the corral, or large enclosure of stakes, and the door is shut. We will suppose that one man alone has to catch and mount a horse which, as yet, has never felt bridle or saddle. I conceive, except by a gaucho, such a feat would be utterly impracticable.

“The gaucho picks out a full-grown colt, and, as the beast rushes round the circus, he throws his lazo so as to catch both the front legs. Instantly the horse rolls over with a heavy shock, and while struggling on the ground the gaucho, holding the lazo tight, makes a circle, so as to catch one of the hind legs just beneath the fetlock, and draws it close to the front legs; he then hitches the lazo, so that the three are bound together. Then, sitting on the horse's neck, he fixes a strong bridle, without a bit, to the lower jaw. This he does by passing a narrow thong through the eye-holes at the end of the reins, and several times round both jaw and tongue.

“The two front legs are now tied closely together with a strong leathern thong, fastened by a slip-knot. The lazo which bound the three together being then loosened, the horse rises with difficulty. The gaucho now, holding fast the bridle fixed to the lower jaw, leads the horse outside the corral. If a second man is present (otherwise the trouble is much greater), he holds the animal's head whilst the first puts on the horse-cloths and saddle, and girths the whole together. During this operation the horse, from dread and astonishment at thus being bound round the waist, throws himself over and over again on the ground, and, till beaten, is unwilling to rise. At last, when the saddling is finished, the poor animal can hardly breathe from fear, and is white from foam and sweat.

“The man now prepares to mount by pressing heavily on the stirrup, so that the horse may not lose its balance; and at the moment that he throws his leg over the animal's back, he pulls the slip-knot binding the front legs, and the beast is free. Some ‘domidors’ pull the knot while the animal is lying on the ground, and, standing over the saddle, allow him to rise beneath them. The horse, wild with dread, gives a few most violent bounds, and then starts off at full gallop. When quite exhausted, the man, by patience, brings him back to the corral, where, reeking hot, and scarcely alive, the poor beast is let free. Those animals which will not gallop away, but obstinately throw themselves on the ground, are by far the most troublesome. This first process is tremendously severe; but in two or three times the horse is tamed. It is not, however, for some weeks that the animal is ridden with the iron bit and solid ring; for it must learn to associate the will of the rider with the feel of the rein before the most powerful bridle can be of any service.

“Animals are so abundant in these countries, that humanity and self-interest are not closely united; therefore I fear it is that the former is here scarcely known. One day, riding in the Pampas with a very respectable ‘Estaneiero,’ my horse, being tired, lagged behind. The man often shouted to me to spur him. When I remonstrated that it was a pity, for the horse was quite exhausted,

he cried out, 'Why not?—never mind—spur him—it is *my* horse.' I had then some difficulty in making him comprehend that it was for the horse's sake, and not on his account, that I did not choose to use my spurs. He exclaimed, with a look of surprise, 'Ah, Don Carlos, que cosa!' It was clear that such an idea had never before entered his head.

"The gauchos are well known to be perfect riders: the idea of being thrown, let the horse do what he likes, never enters their head. Their criterion of a good rider is, a man who can manage an untamed colt, or who, if his horse falls, alights on his own feet, or can perform other such exploits. I have heard of a man betting that he would throw his horse down twenty times, and that nineteen times he would not fall himself.

"I recollect seeing a gaucho riding a very stubborn horse which, three times successively, reared so high as to fall backwards with great violence. The man judged with uncommon coolness the proper moment for slipping off—not an instant before or after the right time; and as soon as the horse got up, the man jumped on his back. At last they started at a gallop.

"The gaucho never appears to exert any muscular force. I was one day watching a good rider, and as we were galloping along at a rapid rate I thought to myself 'surely, if the horse starts, you appear so careless in your seat, you must fall.' At this moment a male ostrich sprang from its nest right beneath the horse's nose. The young colt bounded on one side like a stag; but as for the man, all that could be said was, that he started, and took fright with his horse.

"In Chili and Peru more pains are taken with the mouth of the horse than in La Plata, and this is evidently in consequence of the more intricate nature of the country. In Chili a horse is not considered perfectly broken till he can be brought up standing, in the midst of his full speed, on any particular spot; for instance, on a cloak thrown on the ground; or, again, he will charge a wall, and, rearing, scrape the surface with his hoofs. I have seen an animal bounding with spirit, yet merely reined by a fore-finger and thumb, taken at full gallop across a court-yard, and then made to wheel round a post of a viranda with great speed, but at so equal a distance that the rider, with outstretched arm, all the while kept one finger rubbing the post; thus making a demi-vault in the air with the other arm outstretched: in a like manner he wheeled round with astonishing force in an opposite direction.

"Such a horse is well broken; and, although this at first may appear useless, it is far otherwise. It is only carrying that which is daily necessary into perfection. When a bullock is caught and checked by the lazo, it will sometimes gallop round and round in

a circle; and the horse being alarmed at the great strain, if not well broken, will not readily turn like the pivot of a wheel. In consequence many men have been killed; for if the lazo once takes a twist round a man's body, it will instantly, from the power of the two opposed animals, almost cut him in twain. On the same principle the races are managed; the course is only two or three hundred yards long, the wish being to have horses that can make a rapid dash. The race-horses are trained not only to stand with their hoofs touching a line, but to draw all four feet together, so as at the first spring to bring into play the full action of the hind quarters. In Chili I was told an anecdote which I believe was true, and it offers a good illustration of the use of a well-broken animal. A respectable man riding one day met two others, one of whom was mounted on a horse that he knew to have been stolen from himself. He challenged them. They answered him by drawing their sabres and giving chase. The man, on his good and fleet beast, kept just a-head. As he passed a thick bush he wheeled round it, and brought up his horse to a dead check. The pursuers were obliged to shoot on one side and a-head. Then, instantly dashing on right behind them, he buried his knife in the back of one, wounded the other, recovered his horse from the dying robber, and rode home.

“For these feats of horsemanship two things are necessary,—a most severe bit, like the Mameluke, the power of which, though seldom used, the horse knows full well, and large blunt spurs, that can be applied either as a mere touch, or as an instrument of extreme pain. I conceive that, with English spurs, the slightest touch of which pricks the skin, it would be impossible to break in a horse after the South American fashion.

“At an Estancia, near Dos Vacas, large numbers of mares are weekly slaughtered for the sake of their hides, although worth only five dollars, or about half-a-crown a piece. It seems, at first, strange that it can answer to kill mares for such a trifle; but as it is thought ridiculous in this country ever to break in or ride a mare, they are of no value except for breeding. The only thing for which I ever saw mares used, was to tread out wheat from the ear, for which purpose they were driven round a circular enclosure, where the wheat-sheaves were strewed. The man employed for slaughtering the mares happened to be celebrated for his dexterity with the lazo. Standing at the distance of twelve yards from the mouth of the corral, he has laid a wager that he would catch by the legs every animal, without missing one, as it rushed past him. There was another man, who said he would enter the corral on foot, catch a mare, fasten her front legs together, drive her out, throw her down, kill, skin, and stake the hide for drying

(which latter is a tedious job) : he engaged that he would perform the whole operation on twenty-two animals in one day ; or he would kill and take the skin off fifty in the same time. This would have been a prodigious task ; for it is considered a good day's work to skin and stake the hides of fifteen or sixteen animals.

“ One circumstance may be added before we altogether quit our present subject. A tribe of Indians was located for awhile in one of the back settlements, when one of the divisions of our troops fell suddenly upon them, and all but annihilated them. The chief Indian has always one or two picked horses kept ready for any urgent occasion. On one of these, an old white horse, the cacique sprang, taking with him his little son. The horse had neither bridle nor saddle. To avoid the shots, the Indian rode in the peculiar method of his nation, namely, with an arm round the horse's neck, and one leg only on its back. Thus hanging on one side, he was seen patting the horse's head, and talking to him. The pursuers urged every effort in the chace. The commandant three times changed his horse, but all in vain. The old Indian father and his son escaped, and were free. What a fine picture can we form in our mind !—the naked, bronze-like figure of the old man with his little boy, riding like a Mazeppa on the white horse, and leaving far behind him the host of his pursuers.”

Y.

TWO CASES OF THE EPIDEMIC PREVAILING AMONG THE CATTLE OF WARWICKSHIRE.

By JOHN TOMBS, *M.R.C.V.S., Stratford-on-Avon.*

March 25, 1847, I WAS requested to attend a yearling calf belonging to an extensive agriculturist near Studley Castle, that was taken ill yesterday, and died in a few hours after I saw her ; likewise a young cow that failed this morning, and died on the evening of the 26th instant. The symptoms manifested by the calf were widely different from those of the cow : the symptoms of the calf indicated phrenitis—quick breathing—loss of voluntary motion—she staggered and tumbled down. Eyes drawn into the orbits—pupils dilated—opacity of transparent cornea : when down she tumbled about as though in a fit, with the muscles of head, neck, shoulder, and fore extremities, dreadfully convulsed : when standing, convulsive twitchings of the head—nose elevated and dry—pulse exceedingly quick : when walking had a peculiar gait—

lifted her fore feet up remarkably high and with a jerk, not unlike a horse with the stringhalt.

Symptoms of the cow.—She lay down quietly, fetched her breath quick and short. Pulse 100, and weak—drivelling at the mouth—eyes protruding—vessels of sclerotica injected with blood—tunica conjunctiva reddened—increased lachrymal discharge, and a secretion of pus from the eyes—vessels of the Schneiderian membrane congested (by the bye, it is very strange that cattle practitioners seldom examine the lining membrane of the nostrils)—ears drooping—eyes staring, and a peculiarly dejected countenance.

The calf had been treated by an intelligent farrier. I considered it incurably diseased with a brain and chest affection. In the cow I pronounced the disease to be in the air-passages and chest, and treated her accordingly, holding out to the proprietor no hope whatever of a cure. The cow, previous to death, dragged up her hind feet close to her abdomen several times. The symptoms were different from those of pleuro-pneumonia, inasmuch as there was no grunting.

The treatment, which consisted of slight venesection at the onset, proved of no avail;—spts. nit. æther, febrifuges and laxatives, external stimuli and setons. It is not advisable to subtract much blood in this disease, as I have tried it in others. No preventive has yet been discovered.

27th instant.—*Post-mortem appearances* :—On dissection, the brain of the cow was apparently healthy—viscera of abdomen and pelvis likewise so: some portion of the substance of the lungs was congested, other parts healthy, and not increased in size. The air-passages, from the larynx to the air-cells, were filled with mucus and froth mixed with blood—the lining membrane of the pharynx, larynx, trachea, bronchial tubes, and air-cells, were in a putrid state, and emitted a noxious stench—the turbinated bones were quite black—the mucous membrane of the nasal passage, ethmoid, maxillary, and frontal sinuses, gangrenous—pericardium distended with extravasated blood, emphysema on its outside—substance of the heart highly injected—auricles and ventricles crammed with black blood—the valves of the right ventricle were in a similar state to the mucous membrane of the air-passages, viz. that of putrescence.

The calf had the same appearance after death as the cow, with the exception of the cranium containing a large quantity of fluid, and an increased quantity in the ventricles of the brain.

A few observations may not be out of place. Now, the peculiar symptoms in the calf evidently indicated a cerebral affection. There were no particular symptoms to lead us to suppose a thoracic

affection; but, strange to say, the appearances after death shewed an alarming affection. The symptoms in the cow were decidedly marked: violent coughing, which is invariably the case in bronchial affections. That this is a disease produced by atmospheric influence is too evident from the whole length of the air-passages being in a congested and putrescent state; that it is not pleuropneumonia is quite certain, as the lungs are, when affected, but partially so, and the pleura is not at all diseased. It is very rapid in its progress, destroying life in the incredibly short space of three hours sometimes, generally before thirty-six hours. One-third that are attacked with this disease have cerebral affections in conjunction with diseased air-passages.

The vesicular epizootic of 1840 has been prevalent this year in Warwickshire, Gloucestershire, and Worcestershire, and passed off lightly, only killing a few pigs. Many ewes in lamb have died from a similar disease. I cannot now speak as to its being contagious.

Foreign Veterinary Journals.

THE RECUEIL DE MÉDECINE VÉTÉRINAIRE for February announces the death of two French Veterinary Professors, M. Rigot and M. Lafosse: the former, Professor of Anatomy and Physiology at the Alfort school; the latter, Professor of Clinique and Pathology at the Toulouse school. M. Rigot had been compelled on account of ill health to resign his chair at the school, and since had been diligently engaged in a work on veterinary anatomy, which, unfortunately for science, he has left incompleted, and without any materials by him which might enable others to carry it on.

The same Number of the *Recueil* contains a paper, extracted from the *Compte-rendu* of the Hospital for the sessional year 1845-6, on

Iodine Injections into the Cavities of Joints and Tendinous Thecæ,

From which it appears that M. Velpeau, a Professor at La Charité, has practised injection of tincture of iodine, diluted, in cases of

hydrocele in man with success; and has likewise made use of the same in cases of hydrarthrosis, "uncomplicated with organic alterations," in synovial swellings of the tendinous sheath, in cysts, abscesses, &c.

M. Bouley (the younger), however, has put the same in practice in horses; and has given to the Royal Academy of Medicine, in opposition to Professor Velpeau's paper on the subject, the cases of several horses whose hocks and knees he has treated, on account of distended synovial bursæ, in a similar manner, and whose lives have paid the forfeit of such treatment; though his cases, it is true, form a very inconsiderable proportion to the number recounted by M. Velpeau.

The Alfort Veterinary College has very properly determined, as far as opportunity enabled them, to set the point at rest, and with that laudable view have instituted two experiments, and faithfully published the results. The cases are these:—

CASE I.

A Hungarian cart-horse, eight years old, since February 1846, has had a soft puffy tumour growing upon the outer side of the hollow of the hock, attended by some slight lameness, a circumstance which had drawn attention to it. The tumour accordingly was fired. That proving ineffectual, a second firing was practised, and this time with pointed (instead of blade-shaped) irons. Still no good resulted. On the contrary, the tumour became larger; and another similar one made its appearance upon the inner side of the hock, even larger than that outside; the case was now *thorough-pin*.

In this state, it being found that exercise occasioned lameness, the horse was taken to a veterinary surgeon, who recommended that the swellings be punctured. Copious discharges of synovia followed the puncturation; but the wounds afterwards healed with great rapidity, leaving the hock less for a time only; for, some weeks afterwards, both tumours again appeared as large as formerly.

On the 2d of August, the horse was sent to the Veterinary College at Alfort. It was the near hind leg that shewed the tumours, and of that he was now lame, and particularly when made to trot. And besides, so great were the swellings now, that considerable deformity of the limb had become the consequence. Compared with the sound hock, its volume appeared enormous—double its natural size: there was a difference between them, according to measure, of fourteen or fifteen inches. Both tumours together, as the horse was standing, presented an irregular bi-lobed protuberance, sepa-

rated only by the tendon of the hock running between them, which indeed was almost effaced by their protuberance on each side of it.

The diagnosis pronounced was, that the swelling was caused by tumefaction of the tarsal theca, having no communication with the capsule of the hock joint.

The prognostic was serious. In such a state of enlargement as this is, tendinous sheaths too often resist every means of reduction; and, since the hock has been twice fired, and once simply punctured, nothing seems to remain to be tried but the iodine. Notwithstanding the uncertainty of such treatment, and the danger with which it is on occasions attended, still here is an extreme case, and one in which, even should we fail in the experiment, we should not be compromising any hopes on the part of the owner.

Treatment.—Accordingly, on the 4th of August, the patient being cast, and the limb to be operated on properly positioned, and an injection being prepared, composed of one part of tincture of iodine and three parts of water, at nine o'clock, A.M., the operation was commenced by plunging a trocar into the more dependent part of the tumour, the withdrawal of the stillet of which was followed by a copious issue of limpid synovia, manipulation being used to both tumours to press out their contents, and afterwards three ordinary syringes-full of the iodine mixture were injected. This quantity proved barely sufficient to give the sheath its former distention. After suffering it to remain in three minutes, the injection was allowed to escape, and was got rid of as completely as possible by pressure with the fingers.

The horse was then suffered to rise, and he walked to his stable nowise lamer than before.

At eleven o'clock he was found easing the affected limb. And the two tumours, flaccid as they were after the operation, have now become hot and tender.

At one o'clock, P.M., pain and lameness had increased in the limb, and the tension and heat in the swellings had become extreme. Still no very sensible fever.

At one o'clock, P.M., slight fever of re-action, marked by some respiratory disturbance, and *tension* and *hardness* of pulse. Let blood from the jugular.

Aug. 5th.—The pupil on duty reports that nothing particular occurred during the night. The horse lay pretty uninterruptedly.

At half-past six o'clock, A.M., the circulation and respiration had regained their normal beat. Still very lame at walking exercise. Tumours hot and tense, as overnight, though less sensitive.

6th.—Lameness diminished. Tumours as yesterday—no fever.

7th.—Rests firmly upon the affected limb.

11th.—All lameness has disappeared; none can be perceived even at a trot. The tumours, though no longer tender to the touch, still continue somewhat warm and tense.

17th.—The tumours diminished much in tension, though their temperature is still somewhat higher than natural. Measuring the circumference of the hock, we find a diminution of more than two inches in thirteen days; and in seven days more of one in addition.

At this time the horse was taken away by his master to be put to work; and, on that account, from the 25th of August to the 4th of December following, all observation of him was lost. On that day he was, by especial desire, brought to the College for the examination of the pupils. The near hock had become all but reduced to its natural size, save some fibrous knots upon the gastrocnemius tendon, of long standing, and some thickening of the cap of the hock, so long in a state of dilatation. Actual measurement of the two hocks did not exhibit a difference of more than $1\frac{1}{2}$ inches in lieu of 14, the former differential admeasurement.

From the report of the pupil COGEON, 4th year.

CASE II.

An entire horse, common cart breed, was brought by his owner to the Alfort College for treatment. The near hock is double the size of the off one, and the history given of it, that the tumour has existed a long while, and has been several times fired; and that, as a last resource the animal is brought here. A large thorough-pin is now present, more prominent on the outer than on the inner side, the fluid contents of which can be made to fluctuate from side to side by pressure and tapping with the fingers. The diseased hock measured, including the tumours, twenty-two inches in circumference; the sound hock around the same part but fifteen. The motions of the hock are rendered stiff by the impediment occasioned by the tumefactions.

THE PROGNOSTIC in this case is grave, both on account of the low site of the tumour, and the enormous distention which exists of the capsule of the hock joint as well, circumstances exciting suspicion that there is communication between the two. Injection seems counter-indicated. And yet, as the horse is sent to the College for some extreme measures to be practised on him, the experiment with iodine must be made.

Treatment.—Accordingly, on the 4th of the month, as in the first case, the inner tumour, at its most dependent part, was penetrated with a trocar, when there flowed out more than a pint of synovia. This was followed by the injection of a mixture of

iodine and water—1 to 3—and the injection was retained three minutes within the cavity. In consequence, however, of albuminous matters effused within from time to time obstructing and finally blocking up the aperture, the whole of the liquid injected could not be again recovered. After the animal had risen upon his legs some albuminous synovia made its escape out of the hole; still, this was not injection, more than a third of which it was calculated remained undischarged.

In the evening, the horse had some fever, and shewed darting pains in his limb: still he fed, and seemed on the whole as well as could be expected.

5th.—The tumefaction is much increased, and he rests but occasionally upon the lame limb. The appetite continues good.

6th and 7th.—Swelling of the hock greater—more impatience in bearing upon it—tumefaction hot and very tender on pressure—not a great deal of fever of re-action, and the appetite still good.

8th and 9th.—Has not lain down this last night—hock not more swollen, but augmentation of fever. Pulse 52. Respirations increased in proportion. No longer can suffer the lame limb to touch the ground. The tumefaction of the hock has become irregular, being greater on the outer than the inner side, where there is some sign of fluctuation, as if pus were forming in the joint.

10th.—Violent fever and excessive pain of limb. The pointing part, externally, is punctured; a yellowish fluid is eliminated, not viscous, odourless, and containing to appearance pus globules.

11th.—The tumefaction of the joint greater—pain as great as ever. Appetite failing.

12th, 13th, 14th.—Ulcerations making their appearance in various places, which, from their character, and from the discharges coming from them, threaten the approach of gangrene. They are of a phagedenic nature, running one into another, with livid edges, bad odour, and the discharges from them of an amount much to debilitate. The pulse and respiration are getting rapid, and the appetite becoming worse. At the mouths of some ulcers false membrane is issuing out of the cavity of the joint, which, yellowish in its general aspect, has spots upon it indicative of gangrene.

15th.—Gangrene has commenced within the joint, and the presumption is, that the animal must in the end sink from constitutional irritation, the result of the resorption of the gangrenous ichor. He died during the night of the 16th—17th.

Autopsy, made eight hours after death.

The ulcerations remarked upon during life were found between their ragged edges to extend with the synovial sheath. The lymphatic glands in the groin were in a state of enlargement.

The membrane lining the synovial sheath completely changed by inflammation. It is thickened through serous and sanguineous infiltration; its aspect is rose-coloured and mammillated, the same as that of a suppurative wound at the twenty-fourth or thirty-sixth hour of inflammation. The mammillary elevations upon the surface appear to be no more than, like those upon suppurating surfaces, granulations or cellulo-vascular organised buttons within the plastic bed formed by inflammation. The adherence of this membrane to the indurated tissue exterior to it is most intimate.

Within the sheath we found a yellowish-white soft matter, which seemed nothing more than flocculent albumen coagulated by the alcohol contained in the injected tincture. These coagula, in their middles, exhibited gangrenous spots, having an infected odour.

The sheath altogether is considerably enlarged; compared with that of the sound hock, its dimensions were more than double.

There was found a communication between the sheath and the hock joint, the passage between them measuring upwards of an inch in diameter, and being bordered by a thin duplicature of membrane of old formation.

In the interior of the hock joint, the synovial membrane presented the same aspect as that lining the sheath; fringed elongations beneath the trochlea of the joint being considerably hypertrophied.

The articular surface of the tibia had a yellowish tint, and its polish was sensibly lessened, the articular cartilage being so thin in places that the capillaries of the bones are visible through it. And from the middle protuberance of the tibia, at its most prominent part, the cartilage had quite disappeared, leaving the bone bare and softened. The trochlea of the astragalus presented similar alterations.

* * In a future paper on the subject, we are promised the conclusions deducible from these and some subsequent cases.

British Medical Journals.

EXTRACT FROM THE ADDRESS OF MR. PENINGTON TO THE MEMBERS OF THE NATIONAL INSTITUTE OF MEDICINE AND SURGERY.

“THE National Institute will try and carry through its plans in the face of every discouragement or difficulty which may present itself. It is contemplated immediately to take a house as a per-

manent abode. The representative council will be annually renewed. We shall hold our general, our scientific, and our social meetings. We have already commenced a collection of books, and a large and valuable library will be, doubtless, formed with great rapidity. A museum will be the next object of our solicitude; and, I trust that, before long, we shall be enabled to give *substantial* encouragement to the members of the Institute for contributions to science. A great object of the present meeting has been to bring together the provincial and metropolitan members, that they may have the opportunity of communing freely with each other upon all these subjects, and upon any and every other subject which may bear upon their political and social welfare, and for the especial purpose of promoting the greatest desideratum of all—A MUTUAL GOOD UNDERSTANDING.”

* * * There is more than one or two suggestions in this paragraph which the members of the Royal College of Veterinary Surgeons might adopt, and we confidently hope, before long, *will* adopt, “in the face of every discouragement or difficulty which may present itself.”—ED. VET.

ON GRANULAR DISEASE OF THE KIDNEYS.

By R. H. SEMPLE, Esq., *M.R.C.S.E.*

[From the *Lancet*, 6 March, 1847].

“I HAVE long believed that granular disease of the kidneys is a far more common affection than is generally supposed, and that it is really the cause of a great number of maladies, such as pleurisy, disease of the heart, &c. which are often considered and treated as idiopathic diseases. When we consider the dreadful fatality of granular degeneration of the kidneys, and the train of secondary affections which it entails, it appears to me that the study of renal disease has been most unwarrantably neglected in this country, notwithstanding the able researches of Dr. Bright, Dr. Christison, and others; and as I think it is the duty of the members of our profession to add whatever information they possess to the general stock of knowledge, I am induced to offer a few remarks, illustrated with cases, upon the disease in question.

“In making post-mortem examinations of persons who have died from visceral disease, it is most common to find that the kidneys deviate from the healthy structure, being sometimes larger, some-

times smaller, sometimes softer, sometimes harder; the prevailing character, however, being a deposition of granular matter, mingled with, or entirely obliterating, the cortical and tubular structure of the organ. Even this character, however, is not universal; for in the early stages the granular structure is not perceptible, and congestion is the only morbid indication. Various as are the appearances of the kidneys after death, the symptoms during life are still more various and more obscure, the general indication being an anasarcaous condition of the body, with a vague and undefined sensation of uneasiness; or, more commonly, the disease is at first wholly latent, and its existence is only discovered after death has taken place from secondary disease. Such being the obscurity of this very common affection, it is interesting to inquire whether there exist any means of ascertaining its presence during life; and I think that we may answer the question with tolerable certainty in the affirmative, *the albuminous condition of the urine indicating pretty clearly the existence of granular disease of the kidney*. I am quite aware that albuminous urine may exist without such disease; but the causes are then transient, and the urine ceases to present the albuminous character. Hence, I make it a rule never to infer the disease from one or two examinations of the urine, but to test it repeatedly; and if I find that the albuminous deposit constantly takes place, I have very little hesitation in determining the existence of granular disease. On the other hand, I have repeatedly tested the urine of sick persons labouring under dropsy, and other diseases, and have found no albumen, and the absence of renal disease has been proved by post-mortem examination, or by the complete and permanent recovery of the patient. The discovery of albumen in the urine is not difficult. A small test-tube and a spirit lamp will suffice to produce a coagulum, if albumen be present; and the addition of nitric acid to another portion of urine will produce a copious white precipitate. These two tests, taken together, are conclusive evidence of the existence of albumen; but without such tests it is wholly impossible to form any opinion; for albuminous urine presents no appearance whatever to the eye to distinguish its character; and in the early conditions of disease, even the specific gravity is nearly the same as in the healthy state."

* * * The appearances indicative of this disease are "either an unusually large or unusually small condition of the kidneys, flabbiness with paleness, in some cases increase of colour, of its substance; its membranous tunic tearing off with unusual facility, leaving, perhaps, the surface beneath scabious and glandular, this shewing a granular state of its cortical substance. The tubular

substance likewise often experiences the same granular conversion, the *tubuli uriniferi* entirely disappearing; while, in other instances, both cortical and tubular structures become changed into a homogenous, spitted, granular mass, leaving the ureters, pelves, and calices of their ordinary structure."

This account is full of interest to the veterinarian. Horses are animals in a peculiar degree subject to disease of the kidneys; and they are especially prone to albuminaria. It will be well in our future post-mortem investigations to make a point of examining the kidneys of horses in particular, with a view of comparing their morbid aspects with the representations here given.—ED. VET.

VETERINARY JURISPRUDENCE.

ATKINSON *v.* HORRIDGE.

This was an action on the warranty of a horse.

Mr. Townsend opened the case, to the effect that the plaintiff is a gentleman living at Leeds, and *Mr. Horridge* a gentleman well known to the Cheshire Hunt. At Chester October races the defendant's horse, *Paragon*, was standing at the Albion Hotel, at the price of 160 guineas, and another at sixty guineas. The plaintiff bought them for £210. He warranted the horse *Paragon*, but declined to warrant the other. The plaintiff's groom fetched the horses away on the Monday, and they arrived at Leeds on the 5th of October; and next morning, at the end of a canter, the groom detected that the horse breathed thick. The plaintiff immediately submitted the horse to *Mr. Yates*, a veterinary surgeon, who pronounced the horse as suffering from a chronic affection, arising from a thickening of the mucous membrane, which being incurable, was unsoundness, although it would not prevent the horse being hunted. The plaintiff then wrote to *Mr. Horridge*, inclosing *Mr. Yates'* certificate, and stating that he would send the horse to Manchester to meet defendant's groom on any day he might appoint. No reply was received; and the plaintiff wrote a second letter, requesting that the groom might be sent to Manchester. The defendant wrote that he had submitted the certificate to a competent surgeon and a good sportsman, who said that no specific unsoundness had been alleged. He offered to refer the matter to a sportsman and a gentleman. The plaintiff submitted the horse

to other veterinary surgeons, who confirmed the opinion of Mr. Yates, that he had a chronic disease in the air-passages, constituting thick breathing. The additional certificate was forwarded to the defendant. Some correspondence took place, which ended in the sale of the horse for £56, bought in on behalf of the defendant, which sum was reduced by expenses to £48, and it was for the difference between the purchase-money and that sum that the action was brought.

These facts being proved,

Mr. Chilton, for the defendant, contended that no sufficient disease had been proved to exist to warrant the charge of unsoundness, and also that the price of the horse was not proved, as the two were sold for £210; the other horse being good enough to run fourth in a fast steeple chase.

After several witnesses had been called, *Mr. Townsend* replied.

The learned Judge went minutely through the evidence. Verdict for the plaintiff. Damages £101..5s.

Morning Chronicle, April 10th.

MATHEWS v. PARKER.

Mr. Godson and *Mr. Cripps* were counsel for the plaintiff, and *Mr. Whateley* and *Mr. Cooke* for the defendant.

This was a regular "horse cause," which occupied the court for four hours. The plaintiff is a well-known agriculturist and land agent, residing near Cirencester; the defendant a horse-dealer at Coventry. In May, 1846, the plaintiff bought of defendant at Stow fair a bay horse, with a warranty of soundness. On the day after its arrival at Cirencester it exhibited symptoms of lameness, which increased until June 23d, when it was examined by an experienced veterinary surgeon, who pronounced the animal to have navicular disease in both the fore feet, of which fact notice was forwarded to the defendant, who attended at Cirencester market, and bought the horse at an auction, where it was sold as a lame horse.

For the defence, it was proved that on the same evening of the re-purchase the horse travelled to Coventry, a distance of sixty miles; that it was sold within a few days to Mr. Holland, the contractor for the Coventry water works, who used it regularly for six months at Newbold, near Rugby, and who still possessed him. These subsequent owners, and also the persons who had the horse before the defendant purchased it, proved that the horse had never been afflicted with lameness, and was sound at this time—an

opinion supported by two veterinary surgeons who had examined the horse on Saturday last, and who also proved the navicular disease to be a cause of permanent unsoundness, and incurable. This conflicting testimony might have puzzled the Jury had it not transpired during the inquiry that the defendant was a member of a horse dealers' club in London, the funds of which were devoted to pay the expences of these trials (a circumstance urged with much force in the reply of the plaintiff's counsel), and the Jury, on a short conference, gave the plaintiff a verdict for £10.

Morning Chronicle, April 9, 1847.

THE VETERINARIAN, MAY 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

It is some considerable time since the interest of the public in medical matters was so generally aroused, their sympathy so deeply and universally excited, as it has proved to be in the instance of ÆTHERIZATION. The subject happens to have been one which, by anticipation at least, has touched their keenest if not their best feelings. He who himself has felt pain can not only sensitively feel for others, but can paint his feelings in such vivid colours as to draw down upon him the compassion of those even who have never felt it, and so create such a general sympathy towards this pain-stifling *panacea* as is likely, in the end, to be productive of good in more ways than one. People, for instance, so impressed, it is just possible, may feel more disposition to come forward liberally and handsomely in aid of our public medical institutions. Sympathize, however, for their fellow-men or not, it is certain they begin to feel for their animals. Horses are now sent to veterinary surgeons to be *ætherized* before they be operated upon. And why not?—Why should even brutes suffer pain while a bottle of sulphuric æther stands in the veterinarian's pharmacy? Cannot horses be affected by æthereal inhalation the same as man? If a man can by such means be thrown, as it were, by incantation,

into a trance or state of sweet unconsciousness while the torture of cutting and maiming is going on upon his naked flesh, why cannot his old and faithful and favoured servant, his horse or his dog, be cast into the same senseless condition while any painful operation it may have to undergo is being performed? These are questions veterinary surgeons, both in public and private practice, will find themselves called on—already have, indeed, found themselves called on—to answer; and therefore it behoves them, one and all, to lose no time in bestirring themselves to ascertain what may or may not be done, so far as their patients are concerned, by the æthereal stifer of pain and sensibility.

Did ætherization work *suddenly* on the nervous system, without any premonitory unpleasant feeling, annoyance, or irritation; were the animals exposed to its influence *at once* transported from a state of consciousness to one of insensibility, so that in his transposition he lay motionless and senseless of what was doing to him, of course there could be no difficulty about the matter. But, we would ask, is this the case? What answer does Professor Sewell make? Why, that nothing beyond “a common *soap-dish* filled with æther and held to the animal’s nose” is required; adding, that the odour is “so delightful” that the vapour “is readily inhaled,” and that, “when sufficiently affected, the animal lies quietly down, and submits, resistlessly, to whatever is requisite to be done.” The artist in his studio could hardly from his imagination have painted a picture more pleasing to the mind than this; and we shrewdly suspect our agreeable Professor was seated in that pleasant little back-room of his which looks out into the garden when he drew up for the Royal Agricultural Society his enchanting description of the effects of æther.

More practical inquirers into the operation of ætherization in horses have found that, soon after inhalation has commenced, seemingly from annoyance or irritation or both, the animal has been seized with sundry expressions of disquietude, which, in most cases, have increased to acts of violence, in some to a state bordering on delirium, in the course of which he has so thrown about in such a manner as to put himself, and everybody about him, into imminent danger, disarranging in the course of his plunges the apparatus probably, and thus defeating the object in view. It

appears all very pretty to say that sheep and dogs and cats, and other *manageable* creatures can—by being held down upon the ground or upon a table—be ætherized out of the Professor's "soap-dish;" but how will this in practice apply to a horse, one that is high-fed and high-spirited, and comes snorting and prancing out of his master's stable? If hobbles are to be put on, and the animal is to be cast, preparatory to inhalation, then indeed does ætherization lose, in veterinary practice, half its value; it being of great consideration to us to get rid of the necessity of casting altogether: a preparative which can in no instance be resorted to *without* risk, and one which in most practitioners' hands has, at one time or another, been actually attended with serious and fatal consequences. We do not mean to say, even under such disadvantageous circumstances, it would not still be our duty to persevere with the ætherization; at the same time, it behoves us to bear in mind that, though the animal was cast and hobbled, inhalation might, and would be likely to, excite struggles of more or less violence, and that such struggles might still, incidentally, end in a "broken back."

We would not have it inferred from what has been advanced on the subject, that we are disbelievers in the efficacy—even in the available or beneficial efficacy—of æther vapour on animals. Our present impression is, that the experimenters stand in need of some more complete and effective inhaling apparatus than has hitherto been employed. It most assuredly would be a glorious triumph could we any how manage the ætherization; for then we might crop and dock, and fire and cut to our employers' content, and all without inflicting, at the moment at least, any pain whatever on our patients. Then, indeed, with reason and humanity, might people say to us, "we will not have our horses fired or castrated unless they be first ætherised." As the matter stands, however, no considerate horse-proprietor would think of making such a request—would choose, indeed, to have his horse submitted to an experiment the issue of which is any thing but assured free from danger. And this we assert, because it is now notorious enough that both men and horses have succumbed, under the influence of æther, to rise no more, and, as post-mortem examinations of their bodies has shewn, *in consequence* of such influence.

Pending this state of uncertainty as regards the immediate effects and prospective utility of ætherization we are forced to confess ourselves yet to be in, veterinarians cannot but feel themselves under no slight obligations to any of their professional brothers who will be at the trouble and cost—for experiments of the kind are not made without both labour and expense—of a course of direct experimentation. And we are happy to have it in our power to point to two individuals—Messrs. Henderson and Cherry—who are thus at present commendably engaged, and upon whom, no less on account of their standing and experience as veterinary surgeons than their known expertness and perseverance in matters of an experimental nature, the profession can safely rely. And from the steady, unprejudiced manner in which these gentlemen are pursuing their investigations, there can be little doubt but that in their hands the subject will, in the end, be reduced to its practical applicability.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of March 31, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, JAMES TURNER, GOODWIN, ERNES, FIELD, HENDERSON, CHERRY, Sen.

The Minutes having been read and confirmed,

Mr. Arthur Cherry, as the Hon. Sec. to the Committee, read the Report from the Registration Committee, and entered into a statement in detail explanatory of the proceedings, and the grounds on which the data contained in the Report were founded.

A discussion ensued on these statements, embracing the general nature of registration, and the statistics of the body corporate, in so far as they could, at present, be ascertained; the members present, with a single exception, expressing their gratification at the results which had emanated from the labours of the Committee, though still far from complete, as shewing matter of an entirely new character.

Mr. Goodwin moved, and *Mr. Field* seconded, "That the Report from the Registration Committee be adopted, and entered on the Minutes."—Carried. The same gentlemen also moved and seconded, "That a vote of thanks be tendered to the Committee, and to the Hon. Secretary in particular, for the great labour and attention they had shewn in the prosecution of their labours."

Mr. Ernes briefly returned thanks for the Committee.

Mr. Arthur Cherry also shortly returned thanks, stating that, had there not been the most perfect unanimity existing amongst his colleagues, he should not have been enabled to carry out the measure to the extent to which it had at present gone. He also wished to take that opportunity of recording his thanks to the Committee for the consideration and urbanity they had on all occasions shewn towards him.

The draft of the "Annual Report," as prepared in Committee, was then read by the Secretary, and, being highly approved of, it was moved by *Mr. Field*, and seconded by *Mr. Henderson*, "That the draft of the Report be adopted."—Carried.

Mr. Jas. Turner moved, and *Mr. Goodwin* seconded, "That a vote of thanks be tendered to the Committee, and the Secretary in particular, for the highly satisfactory result of their labours."—Carried.

Mr. Arthur Cherry briefly returned thanks for the Committee, stating that the arrangement was the work of the Secretary, and was so completely in accordance with their own views, that they could not do otherwise than give it their entire concurrence.

It being moved that the Annual Report should be printed, the same was carried.

These motions were all passed with but one dissentient vote, in each case the same.

A letter was read from the Secretary to the Highland Society in reply to a question of but little moment.

The President made some very pertinent remarks on the propriety—nay, necessity—of having a public dinner.

Messrs. Field, Henderson, Goodwin, and Jas. Turner, offered remarks on the same subject, and the matter ended in an understanding that measures should be entered into to forward the desired object.

The Treasurer moved, and *Mr. Arthur Cherry* seconded, that an advertisement be prepared and inserted in the papers, calling on Subscribers to the Royal College of Veterinary Surgeons who had not paid their subscriptions to do so forthwith, in order that the annual accounts might be made up.—Carried.

The sitting then terminated.

A conversation ensued amongst the Members regarding the effects of "æther vapour;" and, as the question is an important one, it may be as well to state the results arrived at:—

Mr. Field stated, that he had performed various operations with the knife and actual cautery on animals while under the influence of æther: he found that there was a serious impediment to an operation from the want of sufficient resistance to the knife, in consequence of the laxity of the tissues generally; that very little blood flowed, from the state of collapse; that no advantage appeared to him to arise from its action during an operation; and he feared that subsequent recovery would too frequently be found to be interfered with; and he had, therefore, come to the conclusion, that, practically, it was not a means of inducing quiescence that he should feel confidence in employing or recommending.

Mr. Goodwin took very similar views.

Mr. Ernes considered, in many respects, that the symptoms were a good deal similar to those arising from suffocation, and made some very scientific remarks, coming to the same general result as the previous speakers.

Mr. James Turner was strongly opposed to it: he could not see what real advantage its use indicated; yet he could not but think that, under certain conditions of the system, it might prove highly valuable as a remedial agent; that, however, time must shew.

The President took very similar views.

The views of *Messrs. Henderson* and *Arthur Cherry* being already recorded, we shall not enter into them here.

The conclusions to which the discussion led seemed to be unanimous,—that the use of æther vapour as a means of inducing quiescence under an operation was not attended with results sufficiently important to overbalance its probable injurious effects, but that its use as a remedial agent might prove hereafter to be valuable.

The discussion then terminated.

Sitting of April 14, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, HENDERSON, ERNES, JAMES TURNER, BRABY, CHERRY, Sen., GOODWIN, and FIELD.

The Minutes being read and confirmed,

Mr. Ernes commenced by stating that, in consequence of the irregular proceedings which had occurred at the examinations at Edinburgh last year, he thought it advisable to move, "That the portion

of the Board of Examiners acting for Scotland be requested to adopt the same mode of examination as that acting for England." He proceeded to state, that he did not wish to interfere with the working of that portion of the Board, but simply to draw their attention to the mode adopted in London, and which had been found to work well; at the same time local circumstances might render some modification requisite for that part of the kingdom.

A long discussion ensued on this subject, in which but one feeling seemed to prevail,—that there was no desire to needlessly interfere with the arrangements of that portion of the Board, but, after what had occurred last year, some change was quite necessary.

Mr. Henderson seconded the motion, which was ultimately carried; and the Secretary was directed to communicate the wishes of the Council, as also the method adopted by the portion of the Board of Examiners acting for England.

Mr. Field moved "That a deputation be appointed to attend the next Examination at Edinburgh, to confer with the Board there on the arrangements requisite." This motion, after some discussion, was carried.

It was then moved "That Messrs. Percivall and Gabriel be appointed as the deputation," which was also carried.

Adjourned.

Sitting of April 21, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, FIELD, KING, ERNES, HENDERSON, CHERRY, Sen., and WILKINSON.

The Minutes were read and confirmed.

Before the special business commenced, the *Treasurer* begged leave to lay before the Council a balance sheet of the state of the finances of the Royal College of Veterinary Surgeons, as he was exceedingly anxious that every member of the body corporate should be made acquainted with the state of their funds. As this was a special meeting, he was aware that it was rather out of routine to enter on it at once.

Mr. Arthur Cherry moved, and *Mr. Ernes* seconded, "That it be now received, preparatory to its being confirmed at the next sitting."—Carried, with only one dissentient.

The revision of the Bye Laws, of which notices had been suspended for the required period of three months, then came under discussion; and after each had been freely discussed and inquired

into, the following alteration and additions were passed, subject to confirmation at the next sitting, which will take place on the 28th instant :—

2. No person shall be admitted as a Member of the Royal College of Veterinary Surgeons who has not served an apprenticeship of three years to some Member of the College in regular practice during the whole of that period; *or, in lieu thereof, shall have attended for four sessional years the practice and lectures specified in law 3, section vi, at one of the recognised Colleges.*

3. *A printed List of Members shall be prepared and published by direction of the Council as often as may be deemed requisite, which List may be had on application to the Secretary on payment of 1s. 6d.*

Mr. Henderson's motion, that "Attendance of not less than three years at an agricultural college be considered equivalent to an apprenticeship," after a very long and animated discussion, in which the opposition shewn turned principally on the best time for bringing such a law into operation, was withdrawn, in consequence of an error in the drawing up of the suspended notice, and with the understanding and a general concurrence that it should be amended and again suspended.

A letter was read from Mr. Percivall, stating that it was impossible, under circumstances, to proceed as one of the deputation to Edinburgh; and as there was not time to make a re-appointment, the matter, of necessity, dropped.

As this will be the last Report of proceedings before the Annual Meeting, we have given the above Bye Laws rather out of order; but, after the sifting they have undergone, there can be little doubt but that they will be confirmed.

FINANCE REPORT OF THE ROYAL COLLEGE OF VETERINARY SURGEONS,

FROM MAY 4, 1846, TO MAY 3, 1847.

298

RECEIPTS.

	£	s.	d.
To balance in hand on 4th May, 1846.....	260	6	9
“ Examination Fees	207	18	0
“ Contributions	6	0	0
“ Ditto from India, per D. Cullamore, Esq....	5	2	8
“ Annual Subscriptions.....	38	7	0
“ Copies of Charter	0	4	6

£517 18 11

EXPENDITURE.

	£	s.	d.
By Rooms for General Meetings, Councils, and Committees	20	3	0
“ Fees to Board of Examiners.....	78	0	0
“ Stationery, Stamps, Envelopes, & Postage...	23	9	0½
“ Solicitor’s Account.....	12	15	0
“ Remaining portion of Loan, with Interest to Messrs. Sewell and Simonds.....	161	5	0
“ One and a Half Year’s Interest on Loan....	25	14	6
“ Allowance to Secretary... ..	50	0	0
“ Printing and Advertising	9	6	6
“ Case for and Carriage of Diplomas to Glas- gow	0	6	11
Balance.....	136	18	11½

£517 18 11

LIABILITIES.

Portion of Loan remaining unpaid, with Interest thereon	355	6	0
Balance in hand, as above	136	18	11½
Deficit.....	£218	7	0½

WILLIAM FIELD,
TREASURER.

MISCELLANEA.

A meeting of the Governors of the Royal Veterinary College took place at the Thatched House Tavern, on Tuesday, April 13th.

On Wednesday, April 14th, at the meeting of the Council of the Royal Agricultural Society, a letter was read by the Secretary, from Mr. Wilkinson, the Solicitor to the Royal Veterinary College, stating that it was the intention of the Governors of the Royal Veterinary College, together with the Highland Agricultural Society, to apply to the Government for a separate Charter of Incorporation, and asking for the co-operation of the Royal Agricultural Society of England for the obtainment of the same. A short discussion ensued, and upon Professor Sewell being asked what it meant, as there had been one already granted by her Majesty to embody the veterinary profession, the Professor's reply, that the one already granted only embraced a *section* of the profession, was received with marks of surprise. The application was heard with evident coldness, and it was proposed by His Grace the Duke of Richmond, that the application be referred to the Veterinary Committee.

*** We would ask what Professor Sewell means by stating that the present Charter embraced but "a *section* of the profession!" His name, as well as those of his fellow-professors, stands as a "petitioner" for it; and not as a petitioner only, but as a "subscriber" to its loan as well, and of the good round sum of £200; and now, forsooth, he would disown his offspring. Moreover, "the section of the profession," so named by Professor Sewell, happens to consist of *several hundred* of its members: a pretty large "section" truly! We would advise the Professor to be in future more guarded in his expressions concerning the Charter, or he may, himself, get on a side which is a little more "sectional" than he will probably like.

To the Editor of "The Veterinarian."

Sir,—It is with pleasure, commingled with somewhat of pain, that I sit down to pen a few lines in reference to the conduct of pupils at present pursuing their studies at the Royal Veterinary College, the object in view being to cause an inquiry, and, by so

doing, not only confer a boon upon myself, but upon the pupils also. You will oblige me by inserting the few lines I have sent you, as you will, I am sure, appreciate the motive; viz. to stimulate the pupils to act and think as men, not as boys just out of their apron-strings. Once upon a time—I think it was in the month of March, in the year 1847—after having been at the Royal Veterinary College from ten A.M. until five P.M., I strolled home. Having taken some refreshment, and seated myself in an easy chair before the fire, its congenial warmth lulled me to sleep. I had a dream; it was as follows:—I was suddenly transported to the lecture-room of the Royal Veterinary College, where I found assembled, from imaginative inquiries, a mixture of Englishmen, Irishmen, Scotchmen, and Welchmen. Their hideous noises, ribaldry, scoffing, jeering, and jesting epithets, made use of, met my ear. Suddenly a change came o’er the spirit of my dream: I fancied that I was located in the dissecting-room of that famed Institution; and what a dissecting-room fancy whispered! In that department I myself was dissecting, was engaged in study, imagination pourtraying that I was, by so doing, laying the foundation for future professional acquirements; when, upon a sudden, something caught my pallid cheek, and, lo and behold, it was a piece of muscle that had been hurled by some boy; and, as the vision became more distinct, I beheld a congeries of them. I remonstrated, and the consequence was a pugilistic encounter, amidst the confusion of which I awoke. Upon reflection, methought what I had seen and heard was more befitting a cockpit congregation than that of men in pursuit of professional knowledge and instruction; and surely, thought I to myself, the Professors cannot be aware of such pupillary conduct, or otherwise they would take ways and means to prevent such disgraceful procedure; for they must be aware that it is utterly impossible to profit by dissection, if pupils are allowed to be interrupted and insulted, by pieces of muscle, plaster of the wall, or coal, coming in collision with their faces, or some other part of their body, collectively with the obscene language made use of in lieu of professional disquisition. I think it, Sir, a duty incumbent upon the Professors to repress such disreputable proceedings—not only on their own account—not only as a protection to those students who wish to make the best use of their time whilst at the College,—not only for the sake of the Institution itself, but for the credit of the profession generally.

Hoping the Professors will take means to cause a reformation,

Believe me, your’s truly,

ETUDIANT.

THE
VETERINARIAN.

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JUNE 1847.

New Series, No. 66.

THIRD ANNUAL REPORT OF THE COUNCIL OF THE
ROYAL COLLEGE OF VETERINARY SURGEONS
TO THE MEMBERS OF THE PROFESSION.

THE Council of the Royal College of Veterinary Surgeons have the gratification of presenting their Third Annual Report to its members, in which they have limited their statements to a mere record of facts, which, whether of importance or not in themselves, must have no inconsiderable influence on the welfare of the profession.

One of the first objects to which the attention of your Council was directed last year, was to ascertain, if possible, the views, wishes, and intentions of the Governors of the Royal Veterinary College. Vague and unsatisfactory rumours had, from time to time, reached the Council of complaints made by those gentlemen of our proceedings, of disapproval of our measures, of the unsatisfactoriness of our examinations, and of undue attempts on our part at interference with their institution and property. These were followed by the information of applications having been made at the Home Office for a new Charter, or such modifications of the existing one as should secure to them or to their officers a more extended influence in its working. To ascertain the truth of these rumours and the accuracy of this information, a resolution was passed as early as June 3d, that a deputation from the Council should endeavour to obtain an interview with the Governors of the Royal Veterinary College. Application was accordingly made by your President, through the usual official medium, to obtain such interview; but from some cause which your Council does not profess to understand, and therefore cannot pretend to explain, this application not only failed in obtaining the result desired, but even a second, third, and fourth were equally unsuccessful; and it was

not until a direct application had been made by your President to H. R. H. the Duke of Cambridge, the President of the Royal Veterinary College, an application that was promptly acknowledged and courteously replied to, that the interview was obtained. It took place at the Thatched House Tavern, on the 4th of August, and its result is given in the following report to the Council :—

“ On Tuesday, August 4th, 1846, your Deputation waited, according to appointment, on the Governors of the Royal Veterinary College. There were present on the part of the Governors, His Royal Highness the Duke of Cambridge, who occupied the Chair; Mr. Denison, M.P.; Mr. Newdigate, M.P.; Mr. Angerstein, Mr. Berens, with Professors Sewell, Spooner, and Simonds. On the part of the Council, the President, Messrs. W. Percivall, Henderson, T. W. Mayer, Ernes, and Gabriel. On the Deputation appearing, His Royal Highness the Duke of Cambridge commenced by stating that he had taken the chair on this occasion with the view of promoting the interests of all parties, and of bringing about a more amicable adjustment of the differences he was sorry prevailed, and of which he now heard for the first time.

“ The President observed, that the Deputation had sought an interview with the Governors of the Royal Veterinary College for the purpose of expressing, on the part of the Council and the profession generally, the most amicable feelings, and their desire not to do any thing detrimental to the interests of the parent institution: it was their wish that a better understanding should exist between all parties, and it was with the hope of producing this, and also of hearing the wishes of the Governors—for as yet no communication had been received respecting those wishes—that the Deputation had presented itself.

“ Mr. Denison replied by stating, that he thought the parties now present had been put in full possession of the wishes of the Governors of the Veterinary College by Sir James Graham, and he understood that upon the receipt of that communication, a Deputation waited upon Mr. Manners Sutton, and that the Deputation stated they would not submit to or allow any alterations to be made in the Charter. He concluded with most freely exonerating the profession from having obtained their Charter by any undue or dishonourable means, laying the entire blame of its having been granted on the supineness of the Governors themselves, and the carelessness of their professional adviser.

“ The President admitted it was quite true that Sir James Graham had submitted certain alterations for the consideration of the Council, but that those alterations involved a total destruction of the present Charter, and were subversive of the best interests of the profession and of the existing Council, inasmuch as they went

to the extent of introducing the Master of the Horse, the Master of the Buckhounds, and other officers of state, into that body; and for these reasons they had declined assenting to any such alterations.

“Mr. Newdigate observed, that it was not the wish of the Governors of the Royal Veterinary College to have any such alterations made; they had no desire for any change in the governing Council of the Royal College of Veterinary Surgeons.

“Mr. T. W. Mayer thought the gentlemen present on the part of the Governors misapprehended the position the veterinary profession had assumed. It should be remembered that, six years ago, they had requested the Governors to obtain for themselves and the profession generally a Charter of Incorporation; that this had been refused; in consequence of which they had, at the cost of great labour and very considerable expence, obtained one for themselves. Not willing, however, to assume any position at all hostile to the existing institutions, they had requested that that Charter should be on some such plan as the College of Surgeons, in order that the College of Veterinary Surgeons should be placed in the same relative position to the veterinary schools as the College of Surgeons was to the medical schools: they had obtained this, and they conceived it was no more than what they were justly entitled to. Sir James Graham wished parties to be introduced into the Council totally unconnected with the profession. This, the honourable gentleman said, was not the proposition of the Governors of the Royal Veterinary College; and it was, therefore, but an act of justice to put the Council of the Royal College of Veterinary Surgeons in full possession of the alterations required.

“A long and animated conversation followed, in which the members of the Deputations on both sides took part, and which terminated in the Governors consenting to hand over for the opinion of the Council the proposed alterations, which had been prepared with the approbation of the English Agricultural Society and the Highland Agricultural Society of Scotland.

“His Royal Highness, after again expressing his good wishes for the benefit of the veterinary profession, and his hope that this interview would be productive of good, and adding his willingness to attend on any future occasion if required, left the chair, and the Deputation shortly after separated.

“THOMAS TURNER,
“*President.*”

As a consequence of this interview a copy of the existing Charter, with the alterations and additions required to be made therein by the Governors of the Royal Veterinary College, was received

from the solicitor to the Royal Veterinary College: it was referred to the Deputation for consideration in committee, and the nature of the changes required, and the opinion of your Council thereon, will be most clearly understood from the following Report of the Committee, unanimously confirmed by the Council itself.

[This "Report" will be found printed in our Number for September last—vol. xix, p. 517 *et sequent.*—under the heading of "The Objections of the Royal College of Veterinary Surgeons to the Alterations proposed to be made in their Charter by the Governors of the Royal Veterinary College.]

Pending these communications with the Governors of the Royal Veterinary College, the following communication was received by your President from the Home Office:—

Sir,

Whitehall, 23d July, 1844.

THE subject of the Charter granted to the veterinary profession having been brought before Secretary Sir George Grey, I am directed to refer you to Mr. Manners Sutton's letter to yourself of the 11th November last, recommending, on the part of Sir James Graham, certain changes in the existing Charter granted to the Royal College of Veterinary Surgeons, with a view of meeting the objections of several influential bodies interested in the advancement of the veterinary profession.

It appears that a deputation from the Council of the Royal College of Veterinary Surgeons shortly afterwards waited upon Mr. Manners Sutton for the purpose of considering the proposed alterations, but no document can be traced in this office shewing the result of this deliberation.

Before taking any further steps in the matter, Sir George Grey is desirous of receiving, with the least possible delay, a statement of the views entertained by the Council of the Royal College of Veterinary Surgeons in respect to the alterations in the existing Charter, recommended by Sir James Graham, to enable Sir George Grey to judge what farther proceedings may be necessary.

I have the honour to be,

Sir,

Thos. Turner, Esq.,

Your obedient servant,

Royal College of Veterinary Surgeons.

S. M. PHILLIPS.

As it was most desirable that your Council should have become acquainted with, and have decided on, the proposals of the Governors of the Royal Veterinary College before a reply was given to this communication, it was delayed till September, when the following letter was sent, your President having repeatedly apologised in the interval for the delay that had unavoidably taken place:—

Sir,

311, *Regent Street*, September 7, 1846.

I have the honour of forwarding to you the four accompanying documents—The Report of the interview with Mr. Manners Sutton—The Report of the interview of the Deputation with the Governors of the Royal Veterinary College—The Charter, with the alterations proposed to be made therein by the Governors, and—The Reply of the Council to those proposed alterations; and in them will be found the information you did me the honour to require from me.

I have the honour to be,

Sir,

Your most obedient servant,

To *S. M. Phillips, Esq.*,

THOS. TURNER.

The report of the interview with Mr. Manners Sutton has already been laid before you, but may be here repeated, to complete the account: it took place the 24th of November, 1845:—

Your President has to report, that an interview has taken place with Mr. Manners Sutton, who at the commencement remarked, that he had requested it upon the understanding that the Council had agreed to certain alterations being made in the Charter. The President, however, begged to remind Mr. Manners Sutton that no such acquiescence had been given. Upon which that gentleman declined entering into any particulars of the views of Sir James Graham, and the interview closed.

THOS. TURNER, *President*,
on behalf of the Deputation.

The other documents alluded to will be found under their respective headings.

Your Council did not lose sight of a topic of great importance—the revenue of the College—touched on but lightly from the lateness of the hour at the last Annual General Meeting; and during the ensuing month seven hundred circulars were issued, stating the depressed state of the funds, and soliciting an annual subscription of not less than ten shillings for their improvement. The result of that application will be given you by the Treasurer; and it is to be hoped that the list of subscriptions for this year will more than compensate for the deficiency of that of the last.

Early, also, last year your Council unanimously decided that their meetings should be thrown open to all members of the profession. A full report of their proceedings had been laid before you in the first and second annual reports for the two previous years; but in order to do away with every idea of secrecy, to exterminate every ground of suspicion, as well as to silence the charges of neglect and misconduct, and prove at once to the body corporate and politic that every member honoured by the election of that

body had done his duty conscientiously and straightforwardly, the Councils themselves, as well as their results, are now open to your attention and scrutiny.

Certain reports and complaints of irregularities at the examination of the pupils of the Edinburgh Veterinary College of last year having been officially made to your Council, they considered it their duty to investigate the same; for which purpose a Committee, consisting of Mr. Mayhew, Mr. W. A. Cherry, and Mr. Gabriel, was elected to consider them. Their report, confirmed by the Council, will give you the result of the investigation.

COPY OF THE REPORT OF THE COMMITTEE APPOINTED TO CONSIDER THE
LETTERS OF DR. KNOX AND MR. MATHER, TOGETHER WITH THE MINUTE
FORWARDED BY DR. M'GREGOR.

In considering the letters of Dr. Knox and Mr. Mather, and the copy of the minute forwarded by Dr. M'Gregor, Secretary to the portion of the Board of Examiners appointed for Scotland, the Committee have to report thereon,

1st. That the allegations of Dr. Knox and Mr. Mather are fully borne out by the official report of Dr. M'Gregor, the Secretary to the board of Veterinary Examiners.

2d. That the allegation of Mr. Mather concerning the division of the Board of Examiners into three distinct Boards is also borne out by the same official document.

3d. That both these proceedings are a departure from the rules recognized by the Royal College of Veterinary Surgeons.

4th. That the act of Professor Dick and Mr. Barlow voting as "ex officio" members of the Board of Examiners, is opposed to the express declaration of the Charter.

5th. That by interfering with the appointment of the Chairman to preside over the Board of Examiners, Professor Dick did interfere indirectly with the examinations of the pupils, and violated the intent of the Charter.

6th. That Mr. Barlow, not being a Professor or an appointed Lecturer, his assumption of the right to vote as an "ex officio" member of the Board of Examiners was a violation of the Bye-law, sect. 5, 3.

The Committee, therefore, respectfully suggest that the parties who have so offended be admonished.

The Committee would further suggest, that the circumstance of the Board of Examiners having countenanced an irregularity, by attaching their names to diplomas granted to persons who had not been examined before the whole Board, is much to be regretted, and, if continued, calculated to be detrimental to the best interests of the body politic.

That, to prevent the occurrence of similar irregularities, the portion of the Board acting for Scotland be requested to adopt the same mode of examination as that pursued by the London portion, and which has received the approbation of the Council.

The Committee also suggest the propriety of entering into the consideration of the remunerations of the Scotch Veterinary Board of Examiners,

and that it would be highly desirable the English and Scotch Boards should be upon one and the same footing, so far as their different arrangements permit.

E. MAYHEW,
E. N. GABRIEL,
W. A. CHERRY.

The number of candidates who have received the diplomas of the Royal College of Veterinary Surgeons is one hundred and ninety-six; of these, one hundred and fourteen graduated at the Royal Veterinary College in London, and eighty-two at the Veterinary College in Edinburgh.

From the year 1840 to 1844 a Committee, elected at a public general meeting of the profession, assembled to consider the desirability of obtaining a Royal Charter of Incorporation, and named the Veterinary Committee, were unceasingly and indefatigably employed in obtaining that object: not only was the most unremitting attention and great individual labour required for this purpose, but certain expenses had to be incurred, to meet which a public subscription was opened, and liberally responded to by the profession, the sum of £250 having been contributed. When, however, the triumphant reward of their labours, the obtainment of the Royal Charter of Incorporation, was carried, it was found that the necessary official and other expenses were so heavy, that, to meet them, a loan was obliged to be had recourse to: they were met, but the debt incurred in so doing was thrown on the responsibility of the Committee, upon whom, until the early part of last year, it rested. At that time, however, your Council, taking into its consideration the extreme injustice of those liabilities being allowed to continue, elected a Committee, consisting of Messrs. Braby, Ernes, Gabriel, Henderson, King, and Mayhew, to inquire into the matter, when the above facts were elicited by the Committee, as also that the sum then actually owing was £250. Your Council, on receiving this report, decided that the liabilities hitherto borne by the Veterinary Committee be undertaken by the Council themselves; thus at once freeing individual members, and leaving the debt to be refunded by the body at large, for whose benefit and improvement it had been incurred.

Your Council hitherto had been almost unremittingly employed, not in defending their own acts—for they, made known to you nearly as soon as decided on, must speak for themselves—but in exposing interested mis-statements, in exploding unfounded accusations, and disproving reports, utterly groundless it is true, but which still,

unreplied to, might produce impressions incompatible with the truth, considered that when they had ascertained and replied to the demands of the Governors of the Royal Veterinary College, and had put the Secretary of State for the Home Department in full possession of their past proceedings, that the time had arrived when it was desirable that some step should be taken in order to prevent those mis-statements, misrepresentations, and unfounded charges, being again and again reiterated. For this purpose they decided on laying a statement of their own views, wishes, and intentions, before the Home Secretary; and to do this they decided, after the most grave and mature deliberation, that a Committee should be appointed to prepare a memorial to be presented at the Home Office, and Messrs. Mayhew, Ernes, W. A. Cherry, and Gabriel, were named as constituting the said Committee. These gentlemen proceeded to their task steadily and decidedly, bearing fully in mind and duly regarding the grave charge entrusted to their hands. The consequence was, the document they placed before the Council was adopted without a single material alteration; a proof most gratifying to the Committee of their entire concurrence in, and full approbation of, their labours.

[“The Memorial” will be found printed in our Number for December last—vol. xx, p. 694 *et sequent.*]

This Memorial was forwarded to Sir George Grey, and received the following satisfactory reply:—

Sir,

Whitehall, 10th Nov. 1846.

I AM directed by Secretary Sir George Grey to acknowledge the receipt of your letter of the 4th instant, transmitting a Memorial from the President and Council of the Royal College of Veterinary Surgeons; and I am to inform you, that no formal application has been yet addressed to Sir George Grey for a new Charter from the Royal Veterinary College since the proceedings referred to in your letter of the 5th of September, and that, in the event of his receiving such an application, a communication will be made to the Royal College of Veterinary Surgeons before it is granted.

I am, Sir,

Thos. Turner, Esq.,
President of the Royal College
of Veterinary Surgeons,
311, Regent Street.

Your obedient servant,
S. M. PHILLIPS.

The registry of the members of the veterinary profession being, as you are doubtless all well aware, most defective, your Council thought it desirable that a new list should be prepared, giving not

only more accurate information than that contained in the former, but also of a much later date, as between two and three hundred candidates must have been admitted into the body corporate and politic since the first was published. Acting, therefore, on the system they had found in other cases to work so well, they delegated the work, that might have been carelessly and dilatorily done by the many, to the care and industry of the few. A Registration Committee, consisting of Messrs. Braby, Ernes, T. W. Mayer, Mayhew, and W. A. Cherry, was accordingly appointed; and some idea of their labours will be gleaned from the latest, but as yet far from the last, Report to be made to your Council.

[This "Report" will be found printed in our Number for last Month—May—at page 270 *et sequent.*]

The Committee ardently hoped that they would have been able to have had a list ready by the General Meeting; but from unavoidable obstacles, entirely beyond their control, they find that only a very incomplete list could be prepared.

A Committee has also been appointed to take measures to collect all necessary information preparatory to the drawing up petitions to both Houses of Parliament; but, from the very defective state of the registration returns up to the present time, they have not yet been enabled to commence their labours.

The labours of your Council did not cease with the last year. Early in January their most serious consideration was given to the improvement of the code of Bye-Laws of the College. This most important subject received their full and undivided attention; and the alterations and additions, the result of their labours, will, it is believed, be found to add materially to their usefulness and efficiency.

During the past year a few changes have taken place among the officers elected by your Council. Your late Treasurer, Mr. F. King, finding his private engagements considerably increased by the lamented death of his father, one of your Vice-presidents—replaced by Mr. Henderson—gave in his resignation; and the Council, after expressing their regret at his doing so, and thanking him warmly for his valuable services, elected Mr. Field to fill his place. Mr. G. Baker, one of your Board of Examiners, and a valuable member thereof from his having undertaken the onerous department of Cattle Pathology, having entered into new and extraneous engagements, resigned his seat at the Board. His resignation was

also received with regret, and his services specially remembered. The necessity of a perfectly competent substitute to fill his seat was duly considered by your Council, and the result of that consideration was the unanimous election of Mr. Mayer, of Newcastle, in his place. It is most gratifying, however, to your Council, as they are sure it will be to yourselves, that both these gentlemen stated they were ready at all times, both personally and pecuniarily, to forward the views of the College, and that the highest pleasure and gratification they could receive would be in so doing.

Mr. Liston, another highly valued member of the Board, resigned in consequence of his evenings being so fully occupied by his election as a member of the Board of Examiners to the College of Surgeons: he has been replaced by Mr. Solly, of St. Thomas's.

The attention of your Council has never been withdrawn from those privileges and immunities so anxiously looked for by, and of so much importance to, our professional body: true it is they have not as yet been obtained, and, unfortunately, equally true is it that the cause of their non-obtainment is not an extrinsic one, but one engendered and kept up among ourselves. So long as there are parties who will seek for exclusive and partial privileges, which not only cannot benefit, but in which the profession at large cannot even participate,—so long is there a groundwork left by the cupidity of the few for the refusal of great and permanent advantages to the many. The time, however, is near at hand when this state of suspense and indecision will be terminated; and then your Council are equally sanguine of obtaining the objects of your wishes, as they will be prepared to adopt every measure for their speedy realization.

Your Council cannot, if they would, forget—for every meeting but too painfully reminds them of the fact—that the Royal College of Veterinary Surgeons is still a houseless body. No local habitation has yet been found in which your elected representatives can assemble to ameliorate your condition and forward your interests. Nor is this the only evil; for libraries and museums, which have already been offered for your acceptance, they have been compelled to decline, solely for want of accommodation. Can a cause of regret, so incompatible with the convenience and so derogatory to the dignity of the body corporate, be much longer tolerated? Your Council would fain hope not; but rather trust that, while we are one and all actively pressing forward in the cause of science and

humanity, and that while, by so doing, we are ensuring to ourselves and to our successors a more favourable position in public estimation—a consummation most devoutly to be wished—not only as securing additional personal comforts and respect, but also as proving that science, intelligence, and individual worth, may be legitimately and honourably devoted to alleviating the sufferings of classes of animals, inferior far indeed in dignity to ourselves, but still of value and importance to our comforts and necessities; while these high and worthy objects occupy an important share of our time and attention, we do trust that a portion of our reward will be, that a permanent structure shall be found in which may be treasured up the invaluable mental and physical contributions of our professional brethren; in which the aspirations of genius, the investigations of science, and, above all, the more hardly earned results of experience, may be safely deposited and honourably remembered; and from whence the glad tidings of amelioration, immunities, privileges, and advancement, may be diffused to every member of the veterinary profession.

E. N. GABRIEL,

SECRETARY.

London, May 1847.

* * * The “Finance Report,” printed in our Number for last month—May—p. 298, concludes this faithful *Compte-Rendu* of the Proceedings of Council for the Sessional Year 1846-7.

THE BYE-LAWS, &c., OF THE ROYAL COLLEGE OF VETERINARY SURGEONS,

[AS REVISED BY THE COUNCIL],

DATED JANUARY 1, 1848.

* * * The “Alterations and Additions” referred to in the Annual Report (p. 309,) are printed in *Italics*.

SECTION I.—*The Seal.*

THE common seal of the Royal College of Veterinary Surgeons shall consist of the armorial bearings, crest, and motto of the College, as follows; viz.—

Arms.:—Argent, a cross, engrailed gules between a horse's head erased in the first quarter; an arrow in bend, entwined by and piercing a serpent in the second; a horse shoe in the third, all proper; and a bull's head, erased sable in the fourth.

Crest.:—On a wreath of the colours, a centaur proper, holding a shield argent, charged with an aloe, also proper, as the same are in the margin hereof more plainly depicted.

Motto.:—"VIS UNITA FORTIOR."

CHAS. GEO. YOUNG, *Garter*
J. HAWKER, *Clarenceux*.
FRAN^s. MARTIN, *Norroy*.

The common seal shall be in the custody of the President for the time being.

SECTION II.—*Admission of Members.*

1. No person entering to the Veterinary College of London or Edinburgh, or such other veterinary school as may be sanctioned by the Charter on or after January 1, 1845, shall be admitted a member, or be eligible for examination by the Board of the Royal College of Veterinary Surgeons, until he has attained the age of twenty-one years, *and has produced the certificates required in Section VI.*

2. No person shall be admitted as a member of the Royal College of Veterinary Surgeons who has not served an apprenticeship of three years to some member of the College in regular practice during the whole of that period; *or, in lieu thereof, shall have attended for four sessional years the practice and lectures specified in Law 3, Section VI, at one of the recognised Colleges.*

3. A printed List of Members shall be prepared and published *by direction of the Council as often as may be deemed requisite*, which list may be had on application to the Secretary, on payment of 1s. 6d.

4. Every Member, after his admission, shall subscribe his name in a book to be kept for that purpose, and shall receive a copy of the Bye-Laws, to which he will be bound to conform.

SECTION III.—*Meetings of the College.*

1. *The Annual General Meeting of the members of the Royal College of Veterinary Surgeons shall be holden on the first Monday in the month of May, at which meeting six members of the*

Council shall be elected in the room of those who go out by rotation.

2. A general meeting shall be called upon a requisition, signed by twenty members of the College, being sent to the President, such meeting to take place within three weeks after the receipt thereof. The object for which such meeting is called shall be fully stated in the requisition.

SECTION IV.—*Meetings of the Council.*

1. *A meeting of the Council shall be holden within one month of the Annual General Meeting, when the President, six Vice-Presidents, and the Secretary, shall be appointed.*

2. A meeting of the Council shall also be holden on the first Wednesday after every Quarter-day.

3. The President may at any time call a meeting of the Council, and shall do so upon a requisition in writing, signed by five of its members; the nature of the business to be brought forward at such meeting being specifically stated in the requisition.

4. The first business transacted at all meetings of the Council shall be for the Secretary to read the minutes of the preceding meeting, in order to their confirmation.

5. No member of the Council shall vote upon a question relating to himself.

SECTION V.—*The Board of Examiners.*

1. The Council shall appoint twenty persons to constitute a Board of Examiners,—ten for England, and ten for Scotland; the election to take place by ballot.

2. Twelve of the above persons shall be members of the Royal College of Veterinary Surgeons, and eight shall be members of the Medical Profession.

3. The Professors and appointed Lecturers of any veterinary school sanctioned by the Charter, and the Principal Veterinary Surgeon to the Army, shall be, *ex officio*, members of the Board of Examiners; but they shall not receive any portion of the fees accruing from the examinations.

4. *No Professor of any or either of the Colleges of which the person desirous of becoming a member of the body politic and corporate shall have been a student, shall in any way or manner act or interfere as the examiner of such person.*

5. Any veterinary member of the Board of Examiners being absent for more than four consecutive meetings, shall be reported

at the next ensuing meeting of the Council, and, at their discretion, shall be liable to removal.

6. The President, or, in his absence, the senior Vice-President, may, upon any emergency, direct a special meeting of the Board of Examiners. Double the amount of the usual fee to be paid by each candidate examined by such Board.

7. Every member of the Board attending during the entire period of each meeting shall be entitled to the fee of two pounds for such attendance.

SECTION VI.—*Examinations.*

Each candidate prior to his examination must produce certificates to the following effect; viz.

1. Of having completed his twenty-first year.
2. Of having served an apprenticeship of not less than three years to some member of the College in regular practice during the whole of that period.
3. Of having attended, during two sessional years, lectures delivered at the Royal Veterinary College of London or Veterinary College of Edinburgh, or at such other veterinary school as may be sanctioned by the Charter, on
 - a. The anatomy, physiology, and pathology of the horse, *cattle, sheep, pigs, dogs*, and other domesticated animals.
 - b. Veterinary medicine and surgery.
 - c. Chemistry, materia medica, and pharmacy.
4. *Or, in lieu of the apprenticeship required in Law 2, of having attended for four sessional years the practice and lectures named in Law 3 at one of the recognised Colleges.*
5. Of having diligently dissected during his pupillage at the College.
6. Of being able to take off and put on a shoe, to drive the nails skilfully, pare out a foot, and search for its diseases; such certificate to be available either from the Professor of the College, or from the practitioner with whom he served his apprenticeship.
7. Of having conformed to the rules and regulations of either or any of such schools recognised by the Charter at which he has been a student.
8. These certificates, together with the fee for examination, must be delivered to the Secretary at least fourteen days before the examination takes place. The fee shall be five guineas.
9. Each candidate, after having been examined and approved for the diploma, shall pay a fee of five guineas previous to his

admission as a member of the Royal College of Veterinary Surgeons.

10. A list of the successful candidates shall be drawn out, and, having been signed by the Examiners present, shall be transmitted to the President, who shall, upon the receipt thereof and the payment of the admission fee, grant the diploma of the College to each individual.

11. That the signatures of the Examiners present be affixed to the diploma, which shall be in the form following; viz.

“ Know all men by these presents, That the Board of Examiners appointed by the Council of the Royal College of Veterinary Surgeons having deliberately examined Mr. _____, and having found him to be fit and capable to practise the art and science of veterinary medicine and surgery, I, the President of the Royal College of Veterinary Surgeons, hereby admit him a member of the College, and authorize him to practise the said art and science accordingly.

“ In witness whereof I have subscribed my name, and have caused the seal of the College to be affixed hereunto, this _____ day of _____, in the year of our Lord one thousand eight hundred and _____

_____	President.
_____	} Members of the Council.

_____	} Examiners.

_____	Secretary.”

SECTION VII.—*Misconduct of Members.*

1. If at any time a member shall violate any Bye-Law of the College, or be guilty of any fraud, false statement, or imposition, in any matter required by the College, after full and impartial investigation, his admission shall be forthwith cancelled.

SECTION VIII.—*Property.*

1. *The whole property of the Royal College of Veterinary Surgeons is vested solely and absolutely in the body politic and corporate.*

2. *The Council shall have the entire management of and superintendence over the affairs, concerns, and property of the body politic and corporate.*

3. No payments of money due from the Royal College of Veterinary Surgeons shall be made except by order of the Council, and only by cheques; such cheques to be signed by the President of such Council meeting, and countersigned by the Treasurer and one other Member of the Council then present.

4. All surplus monies belonging to the Royal College of Veterinary Surgeons, except what is necessary to be in the hands of the bankers for current expenses, shall be vested, from time to time, in the Three per Cent. Consols of Great Britain, or other Government securities, in the names of trustees appointed by the Council.

ANNUAL GENERAL MEETING.

THE Third Annual General Meeting of the Royal College of Veterinary Surgeons was held on Monday, May 3d, at the Freemasons' Tavern, Great Queen-street, Lincoln's Inn-fields, pursuant to the directions of the Charter. The attendance of members was not quite so numerous as on the previous year, the number present being only about forty. Amongst them we noticed the President and Secretary, Professor Dick, Professor Spooner, Mr. Cherry, senior, Mr. W. A. Cherry, Mr. Ernes, Mr. Percivall, Mr. Braby, Mr. Henderson, Mr. Mayer, Mr. Turner, Mr. Mayhew, Mr. Vines, Mr. Godwin, Mr. Simonds, &c.

At half past one o'clock, the President (Thomas Turner, Esq.) took the chair, and called upon Mr. Gabriel, the Secretary, to commence the business of the day by reading the minutes of the previous General Meeting, for the purpose of their confirmation.

Professor Spooner proposed that, before the Secretary proceeded to read the minutes of the previous meeting, the advertisement convening the meeting be read.

Mr. Gabriel read the advertisement calling the meeting.

Mr. Cherry, senior, inquired if that advertisement did not confine the business to be done at that meeting simply to the election of six members of the Council in the room of the retiring members of that Board.

The President said it certainly did so.

Mr. Gabriel then read the minutes of the previous meeting, and, on

The President proceeding to confirm them by attaching his signature.

Professor Spooner said, before those minutes were signed, he meant to contend that that meeting was an illegal one, business having, according to the minutes read, been transacted at that meeting which was not inserted in the advertisement calling it: it was, therefore, an illegal meeting, and the minutes ought not to be confirmed.

The President contended that it was not necessary that the whole of the business to be transacted by the meeting should be stated in the advertisement calling it. The meeting, he was prepared to maintain, was legally convened according to the Charter: the minutes which had been read detailed the business that had been transacted, and every thing had been conducted in a regular manner.

Professor Spooner still would maintain that they were bound to proceed legally, which they had not done.

Professor Dick was prepared to contend that the proceedings were perfectly regular: it was the course that had been pursued last year, and he was going to move that it be acted on on this occasion; still he thought, that if, at the annual meetings, they were to be strictly confined to the mere election of six members of the Council, it was too bad to call upon the members to assemble from all the distant parts of the kingdom, and he, for one, should not come next year. He thought that it was the duty of the meeting to go into the consideration of the proceedings of the Council during the past year, which ought to be laid before them, and, therefore, he should move that the minutes of the Council's proceedings be also read.

Mr. Mayer, as a member of the Council, was most anxious to give to the meeting an account of his stewardship.

Professor Spooner agreed with the observations of *Professor Dick*, but still considered that they must act in accordance with the terms of the Charter: he, therefore, felt himself bound to shew the meeting what they were doing, and that, if they considered themselves to be a corporate body, they were bound to act as such.

The President said he should at once proceed to sign the minutes, well knowing that they were correct, and being convinced that the Charter could never mean that the College was not to transact general business at a general meeting: and he thereupon signed the minutes.

Professor Spooner would enter his protest against the signing, and read from the 4th page of the Charter an extract in support of his opinion. Upon those words of the Charter he was pre-

pared to contend that any thing brought before the meeting, and not contained in the advertisement calling the meeting, was illegal.

The President said it was now his pleasing duty, for the fourth time, to congratulate them on the Charter they had obtained. He thought it would not be necessary for him to go into the particulars of the proceedings of the Council during the past year, as they were so fully stated in the printed Report the members then had in their hands; still he could not refrain from bearing his testimony to the exertions of the Council in promoting the interests of their glorious cause, to which they had devoted their time, money, and energies, and, having listened to them night after night, he felt bound to pay profound testimony to their exertions. Their attention had been directed to an important alteration of the Apprenticeship clause, and for the future those who shall have attended for four sessional years the practice and lectures specified in Law 3, Section 6, at one of the recognized Colleges, will be admitted; and gentlemen, and men of education, will become members of the College, and rising and experienced veterinary surgeons. The after-good which would be thereby attained would shew forth the veterinary art as having belonging to it men who are a credit to the profession; he, therefore, trusted that they would pursue the system of registration which would alone shew those who are veterinarians from those that are not, so that the world might know who are really competent practitioners—the veterinary surgeon from the cowleech. That would lead to the advantages from the Charter which he was proud to say he could see soon approaching. He knew that several talented, learned, and distinguished individuals, both in and out of Parliament, were exerting themselves on their behalf, and that they would get what they desired; he hoped, therefore, that the meeting would now proceed to the election of six members of the Council for the ensuing year, and that in doing so they would select gentlemen who would carry out the important objects of the Charter, and that, having so done, they would separate with satisfaction at the unanimity which had that day prevailed.

Mr. Gabriel then proceeded to read the “Third Annual Report of the Council of the Royal College of Veterinary Surgeons, to the Members of the Profession,” which occupied upwards of half an hour in the reading, and was followed by much applause.

Professor Dick asked why no report from the Board of Examiners had been read. He considered it most proper that it should be read, and it ought to have been appended to the printed report.

Mr. Gabriel requested to be allowed to read the finance account for the year.

Mr. Mayhew called upon the members to conduct the proceed-

ings as a legislative body, and stand up while they addressed the meeting.

Mr. Godwin (of Birmingham) moved that the Report just read, be received and entered on the minutes, and that the thanks of the meeting are due to the Council.

Mr. Vines begged, before that motion was put, to say a few words on the subject. All that had been done had been praised. Now he quite disapproved of it, and he would contend that the general body of members who were distributed throughout the country were not fairly treated, by those who reside only within twenty miles of London having intimation of the Annual Meeting, and thereby a voice in the deliberations.

Mr. Cherry, senior, observed, that it was the Charter which prevented them.

Mr. Hunt seconded the adoption of the Report.

Professor Dick said, as no other gentleman seemed desirous of remarking on the Report just read to the meeting, he would do so. He had observed that in the commencement of the Report read, the Council stated that they "had limited their statements to a mere record of facts." Now he wanted an explanation of one fact they had stated. He meant that fact which stated that Professor Dick had violated the intent of the Charter by voting as *ex officio* member of the Board of Examiners, and that the parties who so offended be admonished. He would ask on what ground that fact had been taken.

Mr. A. Cherry would tell Professor Dick,—because at the time alluded to, Mr. Barlow was a Demonstrator and not a Lecturer. So they were informed.

Professor Dick asked why, then, it was stated in the Report to be a fact. The next thing he would remark on was, that another fact stated in the Report was, that a Committee had set "to consider the letters of Dr. Knox and Mr. Mather," and yet those letters were not introduced into the Report, which they ought to have been. The third point to which he would allude was, as to the division into three schools. He had condemned that, and also the division this year. He also condemned the manner in which he had been treated by the Council and the deputation to Scotland, by whom he had been condemned unheard. He would not, however, be condemned unheard. He had laboured hard and incessantly night and day to benefit the profession, and yet he was to be condemned unheard, because he had done too much. Then the Report said he was to be admonished for this. For what, he would ask? Not a word would be heard from him, but he was to be condemned. He would now come to the plan. Professor Dick then went on to say, that he had written to Dr. M'Gregor, disap-

proving of an examination of only a quarter of an hour, and contending that it ought to be for an hour. He also condemned the nomination of examiners made by the Council, and cited a case in which one of the examiners did not attend the second day, and where the examiner at the chemistry table, instead of examining upon chemistry, was asking questions about the pathology of bones. He also contended that another of the examiners did more in land surveying than he did in veterinary surgery, and that the examiners sent to Scotland could not even spell correctly the medical terms they had to use. He would point out four examiners who were sitting and drinking strong ale together the night before, and boasting of what they would do. He had never mis-stated a fact in his life, if he had been allowed an explanation. He had always selected examiners who were persons of talent and ability, and fully competent to perform the duties. He considered one grind worth two examinations. During thirty years he had not been absent from a class a single day, and had turned men out of the room who had made a noise. At his solicitation the Highland Society had appointed a Board of Examiners, and therefore he had not been anxious to send men into the world as veterinary surgeons who were incompetent. He called for the names of the diseases in cattle pathology which had been omitted in his school, as alleged in the Report, and contended that, in all fairness, he ought to have the names. He had himself twice lectured upon "rabies," and he had not been a party to the application for a new Charter. He would only further say, that he thought he had suffered quite enough, and that he would show the Council up.

Mr. Mayhew rose, as no one else did, to condemn Professor Dick. He ought to have moved for an inquiry; but for him to come there and say that the facts stated in the Report were false, was most improper. He ought to be ashamed of himself. He had no standing there: he was there—a nothing. He (*Mr. Mayhew*) would agree that Professor Dick had done much, and had laboured hard. He acknowledged his genius, and he revered his abilities; but he should not act against his profession, and, above all, he had no right to act in the manner he had done. It had been said that there had been no lectures upon Rabies, a disease the awful effects of which were destructive to even the life of man—a disease so extensive among dogs had not been lectured upon. Professor Dick knew that upon the pathology of disease he knew nothing. Then, again, as to the lectures on Glanders. He (*Mr. Mayhew*) had passed the College, and knew well enough that there had been no lectures on Glanders from Professor Spooner. He condemned the conduct of persons who asserted that which they knew was false. He would also lecture *Mr. Cherry*, sen.

for his conduct at the Council, by telling him that as a member he sat there in two characters; and he was prepared to contend that there were members of the Council who were trying to upset the very Charter under which they had been appointed, which he called hypocrisy of the blackest dye.

Mr. Cherry, senior, said the vituperation with which he had been assailed by Mr. Mayhew was false, and he should treat it with the contempt it deserved.

Professor Dick moved as an amendment "that the Report be recommitted, and that all the correspondence named in the Report be published with it."

Mr. Cherry, senior, seconded the amendment.

Mr. Simonds treated Mr. Mayhew's violence, which had been directed against him, with contempt, and read a letter from that gentleman while a pupil of his at the Royal Veterinary College, and concluded by calling on the meeting to look at that picture and at this. He had received a testimonial from 73 out of the 80 pupils (a voice cried, No! no!) attending at the time, and he should disgrace the position he held in society if he took personal notice of the attacks made on him.

Mr. A. Cherry, in explaining the proceedings of the Council, expressed his regrets that Professor Dick had not entered into the explanations he had now done at an earlier period, either last year or the year before, which would have prevented much of what had taken place that day. The rule was, in selecting Examiners, to take those of the same country to which they were appointed; and if the lists contained the names of persons not competent for the office, the onus laid on those who had furnished the lists. He thought the correspondence ought not to be published, as its publication would not tend to the credit of some of the parties who had written the communications.

Mr. Cherry, senior, considered it but fair that the letters of Dr. Knox and Mr. Mather ought to be read. All he (Mr. Cherry) knew of the Report before it was read that day was, that he heard it read by the Secretary at the Council at a meeting that he attended, and that it was carried with acclamation, and he was told that he should have a copy, which he had certainly received at half past eleven o'clock that day. The Report was, he contended, a series of imputations from end to end, while, in fact, the Council were only expressing their own opinions. He therefore thought, that if the Council could only do away with what they had previously done, it would be the greatest boon the profession could desire. He wished to know what portion of the examiners' fees had gone amongst the Council, and what had been done by them

for the benefit of the profession at large : he considered nothing at all, for all they had done was to quarrel with the two schools.

Mr. A. Cherry complained that, in the matter of registration, *Mr. Cherry, sen.*, had himself refused to assist the Council by affording them the valuable information he was in the possession of in his official capacity in the army.

Mr. Cherry, senior, denied the truth of that statement.

Mr. Henderson confirmed the truth of *Mr. A. Cherry's* assertion.

Professor Spooner would appeal to several gentlemen present, whose faces he recognized, as having been benefited by his instructions ; and in the conclusion of his address, he spoke in strong language as to the conduct and character of *Mr. Mayhew*, which occasioned considerable confusion and excitement.

Mr. Mayhew with much heat rose to reply, but was stopped by

The President, who said that much had been said by the speakers on both sides in which he had not interfered ; but the discussion had now come to a point at which he felt he should not be performing his duty as President if he did not interfere. Some of the speakers had now come to personalities, which he could no longer permit, as sufficient had been said by *Professor Spooner* to enable *Mr. Mayhew* to call upon him to answer it in another place.

Mr. Mayhew immediately left the room.

The President then put the amendment of *Professor Dick* to the meeting, when there appeared for it six, against it twenty, and the amendment was declared lost. The original motion was then put, when there was for it twenty-six, and against it four. The original motion was declared carried.

The President said they would now proceed with the election of six members of the Council in the room of those retiring.

Professor Dick wished to know if they were not to have the Report of the Examiners read.

The President said they must now proceed to the election. That could be read after the election.

Mr. A. Cherry proposed that *Mr. Braby* and *Mr. Vines* be appointed scrutineers.

Professor Dick seconded the motion, which was carried.

The Election was then taken by ballot in the usual manner, and the result was, that Messrs. Mayer, Gabriel, Dick, and Goodwin were re-elected ; and that Messrs. Godwin, of Birmingham and Silvester, of St. Albans, were chosen in place of Messrs. Langworthy and C. Percivall.

CASE OF TRAUMATIC TETANUS.

By THOS. D. BROAD, *Veterinary Surgeon, Trowbridge, Wilts.*

August 12th, 1846.—I WAS called to a distance of four miles to examine a horse that had been lame in the off fore leg about a fortnight. Upon examination, I found a nail, about an inch and a half long, in the inner commissure of the foot, which had induced suppuration. I pared the foot out thin, applied a poultice, and gave physic.

19th.—Lameness nearly removed; but a few granulations appearing at the place the nail came out of, I applied a little dressing which the owner had by him—I believe it was acid. sulph., ol. tereb., ol. olivæ; stopped the foot, and ordered the dressing to be repeated for a few days, thinking the foot would be well in the course of two or three days.

25th.—I was desired to call and see the mare, as she did not appear very well. I accordingly went, and found her labouring under the first symptoms of tetanus. The pulse was 60, and irritable, the leg very much swollen, and a part of the skin of the heel, up nearly to the fetlock, about to slough, in consequence of the dressing having been carelessly allowed to run over that part at each dressing, which I considered to be the cause of the tetanic symptoms, as the foot had healed: the bowels were constipated.

Treatment.—I had her placed in a loose box, in a quiet situation; I then put into her mouth, with a stick, a strong dose of physic, the jaws being too much closed to admit the hand; ordered the leg to be fomented all day, and a poultice when not fomenting; a pail of thin gruel to be placed in the manger, and no other person but the attendant to be allowed to see her.

26th.—Pulse 80—much worse—bowels not acted upon—head, neck, and tail as straight and stiff as possible—in attempting to move, she appeared as though she would fall—the jaws were quite closed—the leg not so tender: she had drunk a little gruel.

Treatment.—Aloës Barb. ʒiij, calomel ʒj, put in by the side of the mouth in a very soft state; poultice the leg; gruel as before; and leave her quiet.

27th.—Pulse 80. Much the same as yesterday—bowels slightly acted upon: has drunk a little gruel.

Treatment.—Aloës Barb. ʒij, calomel. ʒss, which is held in the mouth some time until partly dissolved, then it is swallowed.

28th. Pulse 75. Bowels acting nicely—spasms rather less—the skin of the heel sloughed: she attempts to take up a little mash—drinks gruel freely.

Treatment.—Belladon. Extract. zijj , to be given as before, and a plaister of the same to be applied to the part that has sloughed.

29th.—Pulse 68. Bowels relaxed—general improvement. Treatment the same as yesterday, and continued, with little variation in the dose of ext. belladon. until the 8th Sept., when she was considered sufficiently recovered to be turned to grass, although it was with difficulty she could get her mouth low enough at first. She did not entirely shake off all appearance of disease for a month; but, after that period, she got as well as before.

DESCENT OF THE BOWEL FOLLOWING CASTRATION.

By the same.

A FEW weeks since I was sent for in great haste a distance of about three miles to see a well-bred two-year-old colt that had that afternoon been castrated. After the operation, when the animal began to walk, the castrator observed an enlargement in the scrotum, which in a few minutes proved to be the intestine. It began to increase, and descended nearly to the hock. I was immediately sent for, and by the time I arrived the castrator had the colt again cast, replaced the intestines, and put three stitches of small twine in the abdominal ring through and across; also three more stitches through the upper part of the scrotum, as close to the ring as possible. The stitches appeared to be well placed in the ring, and I did not consider it necessary to make any alteration: had I been there a few minutes earlier, I should have used the metallic wire, instead of the twine. The colt did well, without any further treatment, more than a little physic and a restricted diet.

This person informed me that he had operated on more than 3000 colts, but never had such a case before. The omentum he frequently found in the scrotum: that he never hesitates to take off, even to the extent of a yard.

PROTRUSION OF INTESTINE THROUGH A WOUND IN THE FLANK.

By the same.

October 25th, 1846.—I WAS called to see a grey cart mare, the property of Mr. H. Wren, of Holt, about four miles distant. She had been gored by a bull, which had a few days before killed a

horse, worth £40, of another person. I found an immense swelling in the off flank, with an opening in the skin three or four inches long, through which the intestines were protruding and looking very dark; but the mare did not appear much disturbed. I bled her, gave a strong dose of physic, ordered fomentations to the part, and not to allow her to lie down.

27th.—Physic has acted well: she appears quite empty, and not at all disturbed, although the swelling is much greater.

I cast her on her near side, and well trussed her up with bundles of straw, and increased the opening in the skin. I then found there were two openings into the cavity of the abdomen, one five inches long in an oblique direction backwards, the other ten inches long and more perpendicular, extending nearly to the inferior part of the abdomen. It required two or three persons to keep the intestines in place during the operation. I first brought together the divided edges of the aponeurosis, then the muscles, and lastly the skin, using the metallic wire, and leaving the ends long enough to protrude through the outer wound, also leaving an opening in the skin at the bottom of the wound to admit of discharge.

The case went on remarkably well. I called on the 21st Nov. to see how my patient was getting on. I found her attached to a plough in the field hard at work, with two of the stitches of wire still remaining in; they afterwards came out, and she has been at regular work ever since.

AN APPARATUS FOR THE SAFE ADMINISTRATION OF THE VAPOUR OF ÆTHER.

Constructed by ROBT. OLDEN, *Veterinary Surgeon, Cork.*

PERCEIVING by some articles in your last two publications, and your remarks on them, the want of an apparatus by which æther can be safely administered to horses, and its action on them fully tested, I beg to forward you a drawing of one designed by myself and used in my practice.

In your April Number, among four cases of experiment there recorded, there is one (Case 4) in which death was evidently caused by suffocation; and in the other cases a like result would have taken place, had not some of the "common air" got in somehow to the apparatus, and, instead of its presence exciting those "violent struggles," it would appear that it was its absence that did so.

In your last, in an article on the same subject, I am surprised to see a statement that "the mind does not become affected; the perception, both in man and animals, is evidently clear," but no

power of motion." In man, the mind does become affected; perception of things external is clear, but the ideas or perceptions of the mind are not. Hence we see patients perceiving objects right, reasoning wrong, and drawing wrong conclusions from them; while in all cases, in men and horses, memory of the sense of pain (evidently shewn to a degree) is obliterated; and as for motion, nothing short of coma suspends that function.

Air, being made the vehicle for conveying æther into the lungs, does not in any way deteriorate its qualities, and its exclusion, in the case beforementioned, terminated in ruptured diaphragm; while the black condition of the blood was caused by the absence of oxygen, and the circulation of impure carbonized blood through the system.

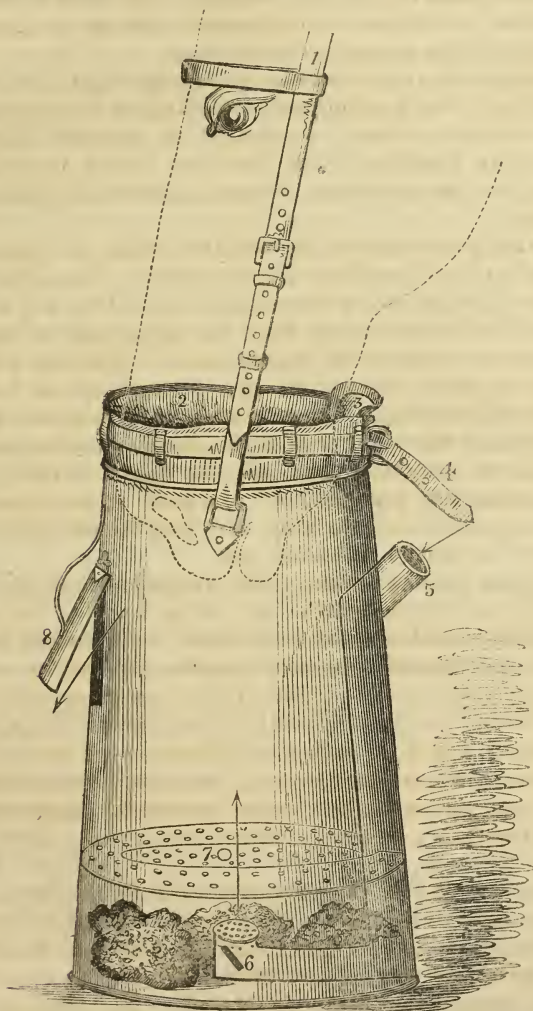
From what I have seen of the effects of æther, it appears to me to be most decidedly and powerfully sedative. In all the cases in which I tried it the horses were vicious or restive, and would not let ropes or hobbles come near them for the purpose of operating; and the sedative effect on all was the same. The time I allow for producing the effect requisite for any operation, or as a means of getting the ordinary modes of restraint on vicious horses, is four to seven minutes; the quantity of æther, seven to eight ounces. It is a mistake to delay operating until the animal is ready to fall; you may commence much sooner. As soon as the pupils dilate, and the respirations become slow and long drawn, is the time to commence: the inhaler remaining on.

In company with Mr. Poett, V.S. 1st Royal Dragoons, I tried the inhaler, at Cork Barracks, on a troop horse in his regiment that would not allow himself to be shod, neither could he be got near the forge. An officer's groom was the only person who could get near the horse's feet; he learned to fit the shoes, while the farrier came behind and nailed them on, the groom holding up his leg. The apparatus was fixed with great difficulty; and while the horse (who reared) was fixed in the rack, being got loose, in seven minutes he was led out of the stable apparently unconscious, and walked to the forge; when the farriers, one by one, lifted the feet, hammered the shoes, &c.

This case shews that the perception of external objects did not convey the right idea to the mind of the horse, or he would not have walked to the forge; neither did the action of the æther destroy the power of motion, although it did nearly that of sensation. The inhaler was removed, the horse beginning to stagger, and it being feared he would fall on the hard floor. On being led out and walked across the barrack-yard, he obstinately refused to go near the forge, and was as determined as ever to smash the first farrier that came near him.

I shewed the inhaler to Mr. Williams, partner of Mr. Weiss,

surgical instrument maker, when that gentleman was in Cork, in March. He expressed his satisfaction at its completeness and fitness, and mentioned that Mr. Weiss had failed in one ordered at their establishment.



No. 1, Head stall, with buckle at side; 2, Pad lined with chamois and stuffed with cotton, like a billiard table cushion; 3, small Pad to fit between the branches of the jaw; 4, Strap to graduate pressure round the muzzle to make it air-tight; 5, Air Tube, with a valve in the small perforated Box at bottom, marked 6; 7, Perforated Cover to shut on the Sponge; 8, Blow-off Valve, which opens and shuts with each expiration and inspiration.

Cork, May 12th, 1847.

“ANON.” TO THE EDITOR OF “THE VETERINARIAN.”

Sir,—EXCUSE my troubling you with this communication; but the too apparent rupture in the veterinary profession has caused me, as a humble member of that profession, much regret: I therefore write soliciting a few facts with regard to the “*locus standi*” of each party, and the cause of this division in the camp; for surely there must be some tangible reason on both sides to enable each to assume their position.

It is to me a most grievous matter to find men whom we, as far as position has placed them, have been accustomed to recognise at the head of our profession running counter to its best interests. “A house divided against itself cannot stand;” which, I fear, in the present instance, will be exemplified but too truly. It appears to me that we have arrived at a very critical period, and there never was a time when union amongst us was more loudly called for.

In consequence of my being so irregularly supplied with THE VETERINARIAN some two years since, I declined it until this year, which will account for my not knowing how matters have progressed for some time previously.

I am not a M.R.C.V.S., though a graduate of the R.V.C.L.; but, if I were aware of the necessary preliminaries, I might avail myself of the privilege: others of my professional brethren are in the same predicament—at least the few I have had the happiness to meet: would you, therefore, kindly oblige me by publishing particulars through your valuable Periodical?

Excuse my signature: I hope to have the pleasure of writing you on another subject, and, in the mean time, beg to subscribe myself,

Your obedient servant,

ANON.

* * * “Anon.” for the information he desires, should turn over the leaves of THE VETERINARIAN for the past year. Let him, in particular, peruse the Editorial articles at pp. 588 and 639: they will put him in possession of the *cause* of all this turmoil and discontent in the “Colleges.”—ED. VET.

INQUIRIES CONCERNING BREEDING HORSES, AND THE PROMISE OF YOUNG STOCK.

To the Editor of "The Veterinarian."

Sir,—It struck me, while reading the very sensible remarks of Mr. Goodwin on the subject of Breeding, that if this gentleman, or any other well qualified, would undertake to put in print a few remarks on the changes which occur from year to year in young horses, and the points which a valuable foal or filly ought to possess when dropped, it would be a great stimulus to breeding; as it would afford to those of little experience the means of determining whether their stock was promising, and thereby save them the annoyance and expense of rearing inferior animals.

If you will insert a few remarks on this subject, you will much oblige me, as a subscriber to your magazine.

Believe me, your obedient servant,

C. C. W. DOMVILLE,

5, Grosvenor-square.

May 9, 1847.

ADDRESS TO THE VETERINARY PROFESSION.

"He is worthy of honour who seeketh the good of every man; and he is much unworthy thereof who seeketh his own profit and oppresses others."—CICERO.

"CLEON. (*aside.*) Alas! I'm circumvented and undone;—outfaced and over-impunderified."—ARISTOPHANES, THE KNIGHTS.

IN once again addressing my professional brethren, I consider that it is essential to put on record feelings which I am sure must also animate every man possessed of any spark of rectitude or of principle, regarding the events which took place at the Annual General Meeting of our body corporate; for were I not to make known my utter dissent to the course which certain parties have thought proper to pursue for now the third time, I should consider that, in a degree, I was liable to the charge of participating in a course so erroneous, so derogatory to every principle of straightforwardness and justice. Neither should I now take this method of expressing my feelings, had any opportunity existed at the meeting just past of making public my utter abhorrence of a course so extraordinary, so perverse of good government and propriety;

but to have made any attempt at expressing opinions on that occasion would only have made the meeting more tumultuous, and have taken up the time of men who came from long distances, not to hear the misplaced effusions of self-conceit and the display of violence and interruption towards those who attempted to check personality, but to turn the business into its proper channel.

To that meeting I, in common with others, went, prepared to enter into statements and hear opinions on matters of importance to the welfare of the general body; but, alas! I might have remained away, for any opportunity that offered. Hour upon hour was frittered away by those who ought, by the simple laws of propriety and courtesy, to have been silent, or, at best, have confined themselves to comments upon matters legitimately belonging to the business of the day; and it was not till the late hour of five o'clock that the election of the members of the Council could be proceeded with, when, in spite of the desperate efforts made to produce a very different result, the most desirable parties were brought in by an overwhelming majority, and this without any connivance or attempt at control.

The manner in which an attempt at opposition was made was most extraordinary—at variance with the rules of courtesy and of order; only violence, clamour, and self-laudation; a determination to drown by clamour any speaker but themselves, and to throw on one side the real business of the day. Such alone was the course pursued.

To comment on such proceedings I cannot trust myself; disgust and indignation prevail too strongly. How can we wonder at the low estimation in which we are held as a body by the higher classes of the community, when such conduct is shewn by those who have assumed to themselves to be *the heads* of our profession? I say, assumed; for by no other right do they hold the position. They are the heads of their classes in the schools, just as a school-master is head of his scholars; but who ever thinks of calling or considering the latter as the *heads* of the people? And their reputation is greater or less in accordance with the position which their scholars are enabled to occupy in after-life—not, mark! what they may be as scholars: just so is the real position regulated of any teacher or professor.

What have we, as men, to do with the private affairs or internal management of a school? If it is well regulated, and produces hereafter men of worth and knowledge, we support it; if otherwise, we alter, re-model, or cease to uphold it. The power being given to remedy existing evils, we exercise it, regardless of what may be the peculiar opinions of any one party concerned. Such is the rule of society, and to such all must submit; and if they will not

conform to that which is required, they must be content to abide by the consequences of their own contumacy. From public opinion there is no appeal; it is the tribunal before which all members of the community must bow; and if any will act in defiance of its behests, the punishment must be submitted to.

We, the many, know the errors existing: the fiat has been issued for the removal of them, and vain is the struggle to combat the decision. If those who are placed in the position do not think proper to obey, then the remedy is simple; others will be produced to supply the want.

In a civilized community a want never exists without its being speedily supplied. The public and the profession have expressed the want of better instructed members of our art. The result is inevitable—the want will be supplied: if by the present establishments, all well and good, and so much the better; but, if not, then others will arise in their place.

With these plain facts before us I must protest against the idle vaunts and imbecile attempts of those who ought to yield at once to the public voice. It betrays extreme ignorance of social law to attempt to oppose such imperative demands, being made a topic on which our time, our best and necessary interests, are to be wasted or deferred. We must have no more of such proceedings as occurred at the last general meeting. The parties who fancied themselves aggrieved were patiently listened to; but they did not bring forward any reasons for recalling or suspending the fiat; on the contrary, their attempts at exculpation only shewed the more urgently the necessity for the speedy accomplishment of the want.

I protest against these things, because it is absolutely requisite that they be put an end to. I have a right to protest, not only for myself, but as one of those elected by the body for the management of their affairs and to watch over their interests. I have a greater right still to protest against the infringement of the interests of that body. Therefore, in the name of myself, and for the body at large, do I thus put my public protests on record; and I further consider that, did I not exert myself to arrest such injurious proceedings, I should be unworthy of the position in which it has been my fortune to be placed by the confidence of my professional brethren, and whose best interests it is my duty to study—

“*Alitur vitium, vivitque tegendo.*”—*Virg.*

For the present farewell.

ARTHUR CHERRY.

May 6th, 1847.

RUPTURE OF A BLOODVESSEL IN THE STOMACH OF A COW.

By WM. BANISTER, *V.S., Battle.*

Dear Sir,—If you deem the following case worthy of insertion in your valuable Periodical, it is at your service.

On January 20th I had a message to attend a cow, the property of a little farmer in this locality, which had eaten nothing the day previous to my arrival. On inspection I found the bowels working natural and well, her eye bright, nose moist, respiration tranquil, pulse 50, and general appearance good. Rumination had ceased. I considered it an affection of the digestive apparatus, and treated it accordingly.

21st.—Medicine operating briskly on the bowels, no apparent pain, no appetite, and pulse a little increased: ordered one gallon of gruel three times a-day.

22d.—Much weaker, rumen distended, and an expression of pain was evinced on being moved: gave 6 drachms of ammonia in combination with vegetable tonics, and tried her with every thing available at that season of the year in the shape of food, to no purpose.

23d.—No better, pulse more feeble, moans much more than yesterday: gave one pint of oil, with one ounce of ammonia. I now felt assured that it was an affection of the third stomach, but of what nature I could not exactly understand, as she shewed no symptoms of fever, and her bowels continued to work well.

24th to 27th.—Kept sinking, notwithstanding all efforts to save her. Having informed the owner of the improbability or impossibility of her recovery, as she was then unable to rise, he made up his mind to destroy her, to avoid further expense and trouble, but he, not being an adept with either the gun or knife, found considerable difficulty in doing so. After trying the poleaxe for some time without effect, he put her head in a pail of water, and thus terminated her miseries.

On the following day I went and examined her. The thorax presented a perfectly healthy appearance; the peritoneum and external coat of the stomachs and bowels exhibited the same; the rumen was very much distended, without the least tinge of inflammatory action. On opening the maniplus I found nearly two quarts of coagulated blood; almost every fold contained a portion. Had I suspected this, I might have been more careful in dissecting the stomach from the rest, and perhaps have found the ruptured vessel. The stomach seemed so obstructed that I do not think a

particle of food, except in a fluid state, had passed during her illness. As I have never seen or heard of a case of this sort before, I forward it to you. The animal had been kept in a quiet yard, or I should have supposed that she had met with some mechanical injury. I shall leave the profession to judge for themselves as to what they think the probable cause might have been.

I am, your's respectfully.

May 20th, 1847.

REVIEW.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

THE PIG: *a Treatise on the Breeds, Management, Feeding, and Medical Treatment of Swine; with Directions for Salting Pork, and Curing Bacon and Hams.* By WILLIAM YOUATT, Esq., V.S., Author of "The Horse," "Cattle," "Sheep," "The Dog," Editor of "The Complete Grazier," &c. Illustrated with Drawings from Life by William Harvey, Esq. 8vo, pp. 164. Cradock & Co. London, 1847.

It was at the instigation of "The Society for the Diffusion of Useful Knowledge" that Mr. Youatt undertook a series of popular veterinary works, treating respectively on "The Horse," "Cattle," "Sheep," and "The Dog,"—the Pig forming no link in the Society's literary chain; but, on the contrary, and, in our opinion, very undeservedly, being excluded altogether from their notice. Between animals so useful and valuable as those just named, it would be folly to pretend to make any comparisons; though, in an agricultural point of view, the pig surely surpasses the dog, and, as an article of diet, no flesh is more esteemed, or oftener served upon a farmer's table, than swine's flesh: and as the Society professed to manufacture *agricultural* useful knowledge, we, for these reasons, opine that the pig had fair claims to their scientific notice. And so thought our lamented colleague, poor Youatt! and therefore resolved to rescue the animal from such undeserved exclusion, and to devote a work to him which should find a place beside those he had executed for the Society, and fill up the chasm they had left in their popular veterinary literature—a work, fortunately, he had, in all save its passage through the press, completed before his death.

The history of the pig, or domestic hog—*hog* being his generic appellation—is found to be curious enough when we come to turn over old and ancient tomes in which mention is made of him. By the Romans he was held in great esteem. They, like ourselves, had discovered the luscious flavour of swine's flesh, and, in order that they might obtain it in the highest degree of perfection, had constituted "the art of breeding, rearing, and fattening pigs, a study, which they designated *porculatio*." And herein they carried their epicurism even farther than our modern cattle-shewers do; since they not only fed them with the most fattening aliment, but even crammed and drenched them, and all "to produce a diseased and monstrous-sized liver." This puts us in mind of some continental gourmands of our own day, who stuff or cram their geese in order to produce that delicacy they so much prize, *un foie gras*.

To the Jews, on the contrary, the pig was a proscribed animal. By the law of Moses they were forbidden to eat swine's flesh; and this law is rigidly observed even by the Jews of the present day, "though the presumed cause of prohibition has long ceased to exist." What that "cause" was—whether it arose out of the "extreme filthiness," by nature, of swine, or out of a "leprosy" the Jews once suffered from severely, and to which the hog is likewise subject; or whether such a prohibition, among many others, was instituted for the sake of making the Jews what they have continued up to the present hour to be, viz., "a peculiar people," is matter of dispute among ancient writers; though, in whatever it originated, "the aversion" has descended not only to the Jews of modern times, but to Egyptians, and the followers of Mahommed as well.

Dull and stupid as the pig, grunting and groping about, appears to the ordinary observer to be, he is far from being wanting either in sagacity or docility. The feats of TOBY, "the learned pig," as he was called, are too fresh in the recollection of all frequenters of our fairs to need more than reminder here; and those who have read Daniel's "Rural Sports," will remember his interesting narrative of the sow trained by Toomer, gamekeeper to Sir Harry Mildmay, to find game, and to stand and back at the same time.

"Some thirty years since it was mentioned in the public papers that a gentleman had trained swine to run in his carriage, and draw four-in-hand through London with these curious steeds. And not long since the market-place at St. Albans was completely crowded in consequence of an eccentric old farmer, who resided a few miles off, having entered it in a small chaise-cart drawn by four hogs at a brisk trot, which pace they kept up a few times around the area of the market-place. They were then

driven to the Woolpack Yard, and, after being unharnessed, were regaled with a troughful of beans and wash. A gentleman present offered £50 for the whole concern as it stood; but this offer was indignantly declined. In about two hours the animals were re-harnessed, and the old farmer drove off with his extraordinary team. He stated that he had been six months in training them."

The WILD BOAR deserves especial mention, from his being generally admitted to be the parent stock of the domestic pig family. And in the time of the Anglo-Saxons the forests of our own country abounded in wild boars.

"The precise period at which the wild boar became exterminated in England and Scotland cannot be correctly ascertained. Master John Gifford and William Tivety, who lived in the reign of Edward II, composed a book on the craft of hunting, part in verse and part in prose; and among the beasts mentioned as those hunted, we find

"To venery I cast me fyrst to go;
Of whiche foure beasts there be: that is to say,
The hare, the herte, the wulfhe, the wild boar also."

Then comes an account of "Swine in America, in Turkey, in China, in Africa, in Europe, in Scotland, England, and Ireland," &c. &c.; followed by chapters containing a popular digest of the anatomy and physiology of the various sections and parts of the body, with notices of the diseases to which each and singular of them is subject, with the causes, treatment, &c., appended, operations not excepted—not even that pleasant(?) one yclept "ringing," reminding us of our old "college" song—

"And pigs he rung, and bells he hung,
And horses shod and cured."

Under the head of "Feeding Swine" (Chap. XII), is a paragraph we strongly recommend to the perusal of our cattle-shewers. It runs thus:—

"But there is no good without its attendant evil. It was, doubtless, originally intended by those who established the distribution of prizes for certain kinds of stock, that the prize-animal should be the most excellent as to its points, the most useful to the farmer, breeder, and butcher, and altogether the most profitable; but not that it should be the fattest! It is reported that, on Hannah More being asked what was the use of cattle-shows, she replied, "To induce people to make beef and mutton so fat that nobody can eat it." This certainly is the *abuse* of them; and in no class of animals is it carried to such an extent as in swine.

The greedy propensities of the poor animal are worked upon; he is shut up, often in darkness, and fed and suffered to gorge himself until he can scarcely move or breathe, and often dies of suffocation, or is obliged to be killed, from the simple exertion of being brought to the show in the most easy and careful manner. A premium would be far better bestowed upon the most useful and profitable animal, the one most likely to make good bacon or pork, than on these huge masses of obesity, whose superabundance of fat is fit for little else but the melting-pot. As much money is often wasted on one of these monsters as would purchase food for half a dozen really profitable animals. And to what purpose? Simply to test the elastic powers of a pig's skin? 'No,' reply the advocates of this species of monomania, 'but to discover which breeds can be fattened to the greatest size in the shortest time, and on the smallest amount of food.' And to this plea we can only reply, that, while we admit the value of such knowledge, we think it might be attained without the sacrifice of a fine animal, at much less expense, and far more satisfactorily. Let the animals be fat, but do not let them be a mere bladder of lard, 'of shape undefined,' every point lost and buried. It is fine and profitable breeds we require, not monstrosities. The grand aim of agricultural societies is to promote the improvement of the breeds, and, consequently, the profit of the breeder and general advantage. We trust that this will shortly be fully understood and carried out, and the cattle-shows become, as it were, model-rooms, instead of mere exhibitions of over-fed, panting, unshapely beasts."

Our limited space denies us the pleasure of turning over the remaining leaves of our lamented colleague's last production. Were we to say it was equal to any of his former works, we should be asserting what nobody who has perused those works—and who that is agriculturist or veterinarian has not?—would subscribe to. It must be remembered, however, that this book comes to us as "the child of his old age;" and, moreover, that the subject of it is one which does not present the same field for a writer as do the more prized and companionable animals, the horse and dog: and yet, despised and neglected, and proscribed as the sorry pig is, poor Youatt, with his wonted happy tact, has composed really a very entertaining little volume about him, and one, too, that contains all the information required concerning him for ordinary or agricultural purposes, evidently designed as it is, as we said before, to fill up the vacant space left by the side of the ox and the sheep, and so to complete his popular veterinary library. The farmer will therefore find the acquisition of the work indispensable; nor will the veterinarian rest contented with-

out it, loving and respecting as he has done the writer of it, when he comes to learn from this review what a pleasing popular turn his favourite author has succeeded in giving to an unpopular subject, and how much of information has been got together, which, if not in the practice of his profession, at all events, in his farming household, he may turn to profitable account.

Extracts from Foreign Journals.

DOCUMENTS ON THE TRADE IN HORSES,

AND ON THE BREEDING AND OTHER HORSE RESOURCES OF
MOST OF THE COUNTRIES OF EUROPE SITUATED TO THE NORTH
AND NORTH-EAST OF FRANCE.

*Furnished by M. A. RIQUET, Chevalier of the Legion of Honour,
Principal Veterinary Surgeon, Secretary to the Commission of
Hygiène for the Secretary at War, &c.*

DENMARK.

FROM time immemorial Denmark has been famed for its horses. The mildness and humidity of its climate, the marshy nature of its soil favourable in particular for pasturage, for a long time preserved its native breed. For twenty years past, however, the introduction of English blood has modified the character of the excellent primitive breeds of Holstein and Schleswig. Jutland alone has maintained her primitive stock.

The most ancient Danish races of horses, according to the report of the natives, derive their origin from the north of Europe. In certain parts, the horses shew the *cossaque* character; that having since become altered by a mixture of Eastern and Spanish blood along with it.

In former times the wealthiest Danish landholders kept numerous breeding studs. At the present day their number is very much diminished. The two principal are, the Royal Breeding Establishment at Friedericksberg, in the island of Zealand, and that of Augustenbourgh, in the isle of Alson, belonging to the Duke Christian-Augustus.

It is calculated that Denmark produces annually 40,000 foals, 12,000 of which are exported, the remaining 28,000 being brought

up and sold at ages varying from three to five years. Taking the greatest loss at 8000 annually, Denmark is capable of giving up, for the purposes of commerce, from 18,000 to 20,000 horses.

Persons commissioned to purchase remounts for the army in Denmark, and dealers exploring the country in search of horses, are in the habit of having their object announced in the churches after or before divine service; also of having bills posted in the different public-houses and other frequented places; which notices no sooner get abroad, than the country people from all around crowd to the appointed place with multitudes of horses, numbers of which, as in all other countries, prove of very inferior quality.

Remount commissions and dealers who arrive in the country after the season of work is over, or when the fairs are being held, have the advantage of a good selection; and the season of the fairs is the best time, and in particular for such remount commissions as have to send their purchases by way of Hamburg.

The Danish horse is ordinarily put to agricultural work from two years and a half to three years old. He is never mounted until he has reached his fourth or fifth year. He is broke by kind management, and afterwards taught to go in harness by the side of some old horse. By nature he is mild and docile; and this, combined with the education he receives, accounts for its being by no means rare to see from twelve to fifteen horses under the convoy of a single man.

For many years no redhibitory laws existed in the Danish dominions; and since even such have been issued by the government, it is not in all parts that they are acknowledged. As the law now stands, the rule is, in case a horse be discovered to have any disease or vice thought to have existed at purchase, to seek the seller, and take care to have some witness or attestation of purchase, and then to find a veterinary surgeon of the neighbourhood; the seller, on his part, being also expected to find some veterinarian or expert person. If these individuals agree in opinion that the horse was when purchased unsound or vicious, the seller is compelled to take him back on the spot, and return the purchase money. Should they not agree, however, the affair has to be carried to a court of judicature; there probably long to remain awaiting decision, with the certainty, in the end, of entailing enormous expenses.

At every horse-market or fair a veterinary surgeon attends, whose duty it is to arrest and send to the green-yard (*fourrière*) any horse suspected of having a contagious disease. A Danish veterinary surgeon encountering a glandered horse, whether it be on the high road, or in a market or fair, has it in his power to condemn the animal to destruction on the spot, without his owner

presuming either to interfere or to seek indemnification, unless the latter thinks that his horse was not glandered: he then may call in other veterinarians; should whose opinion happen to be in his favour, then the veterinary surgeon who had his horse destroyed will have to reimburse him for his loss. Owing to this severe law, glanders and farcy are rare diseases in Denmark.

The remainder of this portion of these interesting "Documents" is devoted principally to the aptitudes of Denmark as a source whence France can draw remounts for her cavalry, and to the different descriptions of horses found in the Danish provinces and islands. We shall watch for the succeeding papers.

Extracts from Domestic Journals.

OBSERVATIONS ON MEDICAL EDUCATION.

By DR. GOLDING BIRD, as contained in his Annual Oration to the Medical Society of London.

[From "The Lancet."]

It has always appeared to me that all these difficulties would be met by making but one portal to the profession, through which all must enter who wish to join its ranks; and the first means of effecting this must be by doing away with (what, I believe, is already nearly practically abolished) the odious and absurd system of five years' apprenticeship, or rather waste, of the most valuable years of a man's life; an exaction which cuts dangerously in two directions, causing a lad to be taken from school before his mind is fully developed, and curtailing, on the other hand, the number of years which might and ought to be devoted to the proper and well-directed study of his profession. I anxiously look forward to the time when some one qualified for this difficult task shall develop a plan which will present this great advantage of opening one general door to our profession. If all students, when commencing their career, were to spend a given time in becoming well acquainted with all the branches of their profession, and, at a certain period, all undergoing the same examination, and receiving the same license, a great good would be gained. Then, such as, from inclination or other causes, wish to devote themselves specially to one branch of the profession, could do so with far greater advantage

than if they were ignorant of all others; and they might, after a certain devotion of time to such object, and passing a second and searching examination, be received into the class of consulting practitioners, with the distinct understanding of their confining their practice to medicine or surgery, according to their choice, and not becoming the rivals of their brethren in general practice, by dabbling in all. By such a plan, a general practitioner could, as his experience increased, or his views in life altered with his inclinations and circumstances, pass at any future time into the class of consulting practitioners. One great and serious difficulty stands in the way, at present, of any hope of this important adoption of one common portal to all; this is one of which I can speak with some authority;—I refer to the too frequently imperfect preliminary education of the aspirants for our profession. The distinction of grades which has so long existed has been a pregnant cause of this fearful evil. Too few, excepting those looking forward to the College of Physicians, commence their medical studies with any thing like a sound classical and mathematical education, so essential to their proper standing, and the want of which all must deplore who unfortunately do not possess such advantages. In conversing with “freshmen” on such subjects, it is too generally found that they bring with them a mere smattering of classical but little mathematical knowledge, and too frequently an absolute ignorance of the modern languages, so essential and important to every gentleman who becomes a member of a liberal profession. Of course, there are many and noble exceptions to this statement, but still the picture I have presented is not overdrawn; the mass certainly fall under the category I have alluded to. It is painful to see a person who might make a respectable tradesman or trustworthy clerk entering a profession to which he is by education unfitted. Nor can this be remedied, until the state interferes with the great subject of education. It is a disgraceful thing, that in England any man may open a school, and assume the dignity of preceptor, without an approach to the attainments which fit him for his practice. When we reflect but for a moment on the influence exerted by education on the boy in the career,—nay, on the habits, intellect, and mind of the man,—can we avoid being struck with the monstrous anomaly which compels every illiterate enthusiast who considers he has a divine call to apply for a license to preach, and which does not permit the lawyer to practise without his annually renewed license, should yet not interfere to protect the mind of the child (who is, indeed, the father of the man) from running to waste from ignorance and neglect, or becoming poisoned by the rank weeds arising from bad associations and often worse principles? It is true that good schools are to be met with, and that many on a colle-

giate system (excepting the doubtful question of residence) are now more abundant; and that, thanks to the principles inculcated by that noblest of institutions, the Established Church of the realm, the clergy, a body so peculiarly fitted for such duties, often undertake the task of teaching. Still, too many parents can ill distinguish between the accomplished preceptor and the academic quack. How useful would it be, then, to place at the proposed portal of our profession a means for sifting the knowledge of those who seek to enter, and thus to determine on their fitness for such an honour! This might be effected by a comprehensive matriculation examination, the passing of which should be considered as giving the *sine quâ non* right of stepping on our threshold. How far better would this be, what a better class of educated youths would knock at our door for admission, if such a plan were adopted; instead of deferring such a task until the application for a license, and then limiting it to the poor farce of translating half-a-dozen lines of Gregory or Celsus!

EXTRACTS FROM THE "OBSERVATIONS ON THE ACTION OF MERCURY," OF HENRY SMITH, M.R.C.S.

[From "The Medical Times."]

IN the beginning of 1845, I read before the Medical Society of King's College a paper in which I endeavoured to prove that mercury acts beneficially in inflammation by becoming absorbed into the blood, and altering the quality of its constituents. Formerly it was thought that mercury acted chiefly through the salivary secretion, and drove out at that point the morbid poison, "and was therefore always given," as John Hunter informs us, "till that evacuation took place; and as its effects in the cure were imagined to be in proportion to the quantity of this evacuation, it was pushed on as far as possible without endangering suffocation."

* * * When taken in moderate doses, mercury increases the action of the various secreting glands and organs, and stimulates some in a particular manner. The salivary glands and the liver are stimulated to increased secretion. After the exhibition of large doses of calomel, a considerable flow of bile is observed to take place; it also directly increases the secretions of the intestines.

* * * The chief characteristics of inflammation are, that the relative quantity of the constituents of the blood is altered, and that these constituents are thrown out in abnormal products. The fibrine is increased in quantity, and it is the fibrine that is thrown

out in the shape of lymph. Serum also is thrown out, and it is found to be richer in albumen. As regards the state of the vessels themselves engaged in this process, it has been pretty accurately determined that they are enlarged and relaxed, and allow a larger quantity of blood to accumulate in them. The nervous system is much disordered when there is any severe attack of inflammation. Now, let us inquire how mercury produces its beneficial effects :—

* * * Although I do not think that mercury acts as an antiphlogistic by acting on the vessels, there can be no doubt that a diminution of their caliber takes place after any treatment calculated to overcome inflammation. So it is that mercury, by overcoming inflammation, brings about a contraction of the vessels ; but that this is produced through some other means than mere action on the vessels, I shall endeavour to shew.

* * * Mr. Swan supposed that mercury acts by producing impression on the nerves, from having found the nerves of the ganglionic system highly inflamed in animals in whose veins he had injected mercury, and to whom he had in various ways administered the mineral. For my own part, I think it is *through the blood and upon the blood* that mercury exerts its powerful and beneficial influence. Of persons affected with mercury the health gets gradually out of order, a species of poisoning is produced, the animal and organic functions are both greatly interfered with ; the body becomes weak and irritable ; there is great increase in the flow of saliva ; and sometimes a profuse secretion from other organs, as the bowels or skin. These are the symptoms perceptible to our senses : but is there any effect on the blood ? and, if any, what effect is produced ? There is found to be a change in this fluid—it is altogether of a much less healthy character ; the clot is left solid, and more easily broken down—there is less cohesion between the parts which form the vital part of the blood. In some cases it will not shew any tendency to coagulate ; in others it is found to be thick and tar-like. Generally speaking, the blood drawn from a patient under the influence of mercury is buffed and cupped ; and it has been said by Andral, that the proportion of fibrine is increased—a circumstance explicable by the febrile state of system. I think we may come to the conclusion, that mercury acts as a direct poison on the blood.

* * * We know that the system must become affected by mercury before it has any beneficial effect on the inflamed organ. We also know that mercury acts most beneficially in inflammation, by *preventing* the deposition of solid and fluid substances from the blood, which is richer in fibrine and albumen ; and it is by producing a change in the quality and probably in the quantity of these constituents, that, in all probability, mercury acts.

* * * But it not only acts in preventing these deposits:—mercury appears to possess the additional power of causing the speedier absorption of abnormal products which have been thrown out; and the results that we observe in practice warrant us to come to this conclusion. How often does the physician observe the beneficial effects of this drug in pneumonia, when the lung has become solid, by the effusion of fibrine in its parenchymatous structure? Under the influence of mercury, the lung, which has hitherto been almost impervious to air, gradually returns to its healthy function: day by day air enters it more readily, the morbid sounds are lost, and freedom of breathing is restored. And how does this happen, except by re-absorption of those inflammatory products which have spoiled for a time the texture and function of the lung? How often does a surgeon see gradual restoration of a joint take place, when it has been crippled by inflammation and its consequences, under a mild and beneficial course of mercury?

* * * The chief power mercury possesses is stopping that action—inflammation—which leads to effusion, and not curing that effusion which has once taken place. The idea that mercury acts chiefly by promoting absorption, has led to the practice of not giving it directly in inflammatory diseases. This appears to me to be in a considerable degree faulty and mischievous, as the time is allowed to go by when the remedy may produce its best result.

* * * There is another fact which, I think, will go far to prove that mercury subdues inflammation by changing the condition of the blood—viz., that its beneficial effects are noticed mostly in those forms of inflammation where there is a tendency to a deposit of healthy lymph, and not pus or imperfect lymph; and this deposit is found to take place in inflammation of the solid organs of the body and the great serous membranes, excited by common causes, such as wounds, or cold.

PARLIAMENTARY PROSPECTS OF THE MEDICAL REGISTRATION BILL.

MR. WAKLEY presented twenty petitions in favour of this bill from physicians, surgeons, and general practitioners in London, Wisbeach, Bradford, Accrington, and other places. The honourable member said, that the right honourable baronet (Sir George Grey), who had consented last session to aid him in passing a medical registration bill, had privately intimated to him that he had re-

ceived applications from some members of the two Colleges for an interview, to state their objections to certain parts of this measure, and had requested him to postpone the second reading of the bill. He should, therefore, not move the order of the day for the second reading till Tuesday, and, after the bill had gone through that stage, he should move that it be referred to a select committee, before which there would be an opportunity given to the different corporations who believed the bill would injuriously affect their interests to state their objections. He had every hope that such a committee would be enabled to shape the various clauses of the bill to obviate every objection. *This was the SEVENTH bill that had been introduced on this subject, and he would undertake to say it should be the LAST HE WOULD TAKE CHARGE OF.* The state of medical law was most grievous. Medical practitioners, in every part of the kingdom, were dissatisfied with it; they were grievously suffering from its condition; and, recollecting the vast utility and importance of the profession, it was the duty of the House to take their case into most serious consideration. Some practitioners, connected with ancient corporations, believed their interests would be injuriously affected by this bill. Instead of attending to their interests or their prejudices, the House should consider the interests of the country. The right honourable baronet, however, would receive the deputations, and hear what they had to say; but he entreated him to bear in mind, that objections urged in private ought not to govern his decisions, unless they could be supported by facts and arguments openly urged in that House. Back-stairs influence had, upon too many occasions, swayed official decisions in this country. The right hon. baronet, however, was too independent to be influenced in his conduct by private representations, unless valid objections could be urged, on public grounds, why this bill should not be proceeded with.

SIR G. GREY was afraid the honourable gentleman was beginning to feel the difficulties of legislation on this subject [*a laugh*]. He had that morning received three representations—one from the College of Physicians, another from the College of Surgeons, and one from a body of general practitioners, all pressing upon him the importance of being allowed an opportunity of stating their objections to the principle and the most important details of the hon. gentleman's bill. Since then, he had received three petitions against the bill, from the apothecaries, accoucheurs, and medical professors, to be allowed to state their objections to the measure. He agreed with the honourable member that a mere statement of objections in private was not sufficient to justify the rejection of the bill; but, looking at the importance of the question, he had thought it right to hear what those gentlemen who thus

objected to the bill had to say. The interview would take place at the Home Office on Saturday, and he should be very happy to see the hon. member on that occasion [*hear*].

MR. HUME said, if all parties were heard before a committee it was very probable that the differences on this question would be accommodated. The bill brought in by the right honourable baronet opposite (Sir James Graham) had failed, because he was assailed by different parties privately, and because he would never allow any bill to go before a committee, where only adverse interests and opinions could be reconciled. He was, therefore, sorry to hear that the right honourable baronet (Sir G. Grey) was about to take the trouble of losing the whole of Saturday by receiving the deputations he had referred to [*a laugh*].

SIR JAMES GRAHAM said, he thought the appointment of a committee would greatly depend upon an assurance which he hoped this House would receive from the honourable member for Finsbury and the honourable member for Montrose. If those honourable members would undertake to improve their time—the one by presiding over and the other by daily attending the committee [*a laugh*—until they had exhausted all that would be said by the medical practitioners [*renewed laughter*], he should feel much disposed to vote for a committee. Unless they would promise to give their attention to all the complaints they would have, he did not think it would be unreasonable on the part of the House not to entertain this bill with any great favour [*hear, hear*].

MR. HUME said this was the first time he had ever been asked to make such a promise. All he could say was, he would do his best.

MR. WAKLEY could make no such promise [*a laugh*]. If he were to preside over the committee till all the differences among the profession were settled, it would be at the sacrifice of his life. To adjust all their differences would occupy till one day after eternity [*laughter*].

After a few words from an honourable member, which were inaudible,

MR. WAKLEY intimated that he would accept the invitation of the right honourable baronet to call at the Home-office on Saturday to hear the objections to this just and reasonable measure.

The second reading of the bill was then postponed till Tuesday.

* * * We observe that Mr. Wakley has postponed the second reading of the bill until Monday the 1st of June.

VETERINARY JURISPRUDENCE.

POWNALL v. BATT.

THE plaintiff is a surgeon of Calne, and the defendant is a horse-dealer of Devizes. Under the recent Act of Parliament, it is well known that either party can demand a jury; and, in this case, a jury consisting of five persons was sworn on the application of the defendant.

Mr. Hulbert, solicitor, appeared for the plaintiff; and *Mr. Norris* for the defendant.

Mr. Hulbert briefly stated the case, and the facts were distinctly proved in evidence. In the month of January last, *Mr. Pownall* bought a horse of the defendant for the sum of £28, the defendant at the time warranting it sound. The horse turned out to be a *roarer*, and notice was given to the defendant; but he refused to return the money. After keeping the animal four weeks, the plaintiff caused it to be sold at a bazaar in Bristol, where it fetched 16 guineas. The action was therefore brought to recover the difference between this sum and £28 originally paid for the horse—together with four guineas, the expenses of four weeks' keep—7s. paid to a man for taking it to Bristol—and £1.. 4s.. 9d., the expenses of the auction. The defendant denied, first, that he gave any warranty; and, secondly, that the horse was unsound.

As the Jury took a very different view of the case to the Judge, or, we believe, any other person in court, we give the evidence more in detail than we otherwise should do.

Mr. Jas. Pownall deposed as follows:—I am a surgeon, and reside at Calne. On the 14th of January I was at Devizes, and saw three horses at Batt's. At my request he brought one over to Calne on the following day. It struck me there was a heaviness of breathing in the animal, and I made that remark to Batt on the day previous. Batt admitted it, but said he could readily account for it: the horse had been at plough, and, when horses were first taken from plough and put to active work, there was always a difficulty of breathing; but that difficulty would speedily wear off. I accidentally met Sergeant-Major Lawrence, and he rode the horse; after which I asked him to be present to witness the warranty. In his presence I expressed my doubts to Batt as to the wind of the horse; but Batt denied that there was any thing the matter with its wind, attributing the heaviness of breathing, as before, to its being taken from the plough. I asked him if he

would warrant the horse sound? and he replied, *he would warrant it sound in every respect*, or words to that purpose. On the faith of that warranty, I paid him £28 by cheque for the horse, which cheque he got cashed within an hour afterwards. I don't think I rode the horse for two or three days after the purchase. It, however, turned out unsound. I fancied there was a lameness as well as a heaviness of breathing; and I wrote to Batt to that effect. Batt answered the letter. I again wrote to him, requesting he would come over; and on the 11th of February I sent a messenger to say I should sell the horse; but Batt did not come over until the 16th, within an hour of the horse leaving the stable for Bristol. He proposed that I should take a cob to use for the time, requesting that I would say nothing about the matter, and he would take the horse to a farm, and within a few days he would get another that would suit me. I told him the shortest way would be to refund me the money I had paid him; but this he positively refused to do, and I declined acceding to any other terms. "Do as you like, then!" he exclaimed: "issue your writ—I only want two or three more, and then I shall have enough to roast a fat duck with." I then told him plainly that I should sell the horse, and sue him for the difference.

Cross-examined by *Mr. Norris*:—I at one time kept a great number of horses, but at Christmas I lowered my stud, and at present I have only one horse. I have occasionally bred horses, but never had as many as half a dozen at one time. I think the greatest number I ever kept was four. I submitted the horse in question to the inspection of Mr. Croley, a veterinary surgeon, who at once said that he had some doubts as to its difficulty of breathing, and recommended me to get a warranty. I never promised more than £28 for the horse; Batt asked £30, but I said £28 was my price, and I would give no more. I am not aware that the Duke of Beaufort has several roarers in his stud; nor am I competent to say whether roaring affects the working of a horse. The nature of my complaint to Batt was, that the horse was lame, and otherwise unsound. I distinctly said I would not buy the horse without a warranty, and he gave me the warranty I have stated, observing at the time that Mr. Tugwell had recommended him, when a horse did not give satisfaction, to take it back, charging a moderate sum for the use.

Mr. Norris.—Pray, Mr. Pownall, is this the first horse cause in which you have been engaged?

Mr. Pownall.—In my opinion, your question is very unnecessary; and I am rather surprised that you should put it, recollecting, as you must, that you were attorney to a very unfair defence in an action which I had brought.

Mr. Norris.—After that observation, perhaps you will be good enough to state the result of that action?

Mr. Pownall was here about to enter into the details of an action which he had brought against a person who was within a month of twenty-one years of age, but who set up the defence that he was a minor—when he was stopped by the Judge, who said that general questions might be put, but the merits or details of any thing not before the Court could not be admitted.

Mr. Norris.—Do you recollect selling a horse to Dr. Everett?

Mr. Pownall.—Perfectly well, and honourably sold, too.

Did not that horse turn out to be unsound?—I believe it fell down and broke its knees, and I was not sorry to hear it.

Did not Dr. Everett ask you to take the horse back?—Yes; but I am not in the habit of acceding to unreasonable requests.

Do you recollect a horse transaction at Marlborough on a Sunday?—Certainly not; I never in my life had a horse transaction on a Sunday.

Have you any recollection of selling a horse at a very high price to a gentleman in Devonshire?—Yes, and I have no objection to give the particulars. I sold a horse for £110. I allowed a fair time for trial. He wanted a warranty, which I declined giving. I allowed him a further time for trial. He afterwards took the horse, and paid me the money I have named.

Sergeant-Major Lawrence deposed to being present when Batt warranted the horse. Batt said, “I warrant the horse all sound and right.”

Mr. Croley, veterinary surgeon, of Calne.—I saw the horse on the 15th of January. It blew hard, and I recommended Mr. Pownall to get a warranty. I saw the horse some time afterwards; it was then suffering from roaring. I consider roaring to be a disease, and “a roarer” to be an unsound horse.

In cross-examination by Mr. Norris, Mr. Croley said, that he had known roarkers ridden at the hunt; and in answer to the question “what causes roaring?”—he answered, any impediment to respiration.

By the Judge:—Is it a generally received opinion that roaring is an unsoundness?—I believe it is. Formerly there was some doubt on the question, but not latterly. It is the opinion of the Veterinary College that roaring is unsoundness.

Mr. Springfield, assistant to Mr. Pownall, deposed to waiting on Batt in Devizes at Mr. Pownall's request, and telling him that the horse was unsound. Batt then expressed his regret, and said he would send another: he promised to come over to Calne, and said he would send a chestnut horse; but he never sent it.

Mr. Langley, assistant to Mr. Fisher, auctioneer, of Bristol,

proved the selling of a horse for Mr. Pownall on the 18th Feb. for 16 guineas :—the expenses of the auction were £1 4s. 9d. and £15 11s. 3d. were paid to Mr. Pownall.

In cross examination Mr. Langley said the horse was sold as a disputed horse, and that such horses rarely fetched more than half their value. He also said that the person to whom the horse was sold had since observed that he would not take £35 for it.

It was also proved that 7s. was paid to the man for taking the horse to Bristol ; and that the horse was kept by the plaintiff for four weeks.

Mr. Norris then, at some length and with much ability, addressed the Jury for the defendant, insisting that the plaintiff had not made out his case. Admitting, although it had not been clearly proved, that the horse was a roarer—roaring was not necessarily unsoundness. Such, however, was the opinion of many eminent veterinary surgeons, and such had been held by the Bench. The celebrated horse Eclipse was a roarer, yet he had never heard it contended that it was on that account unsound, or unfit for racing. It was not sufficient, therefore, to prove that the horse was a roarer ; it ought to be indisputably shewn that roaring was unsoundness, or there would be no breach of the warranty. He then humbly submitted that the plaintiff had not made out his case, and that the defendant was entitled to their verdict. But even if they should be of opinion that roaring was unsoundness, the gist of the action being fraud in the original contract, it should be proved that the defendant knew it was unsound at the time he sold the horse, and referred to the case of *Chandler v. Lopus*, which was an action for selling a jewel as a bezoar stone, and it was held that the action would not lie unless the defendant knew at the time it was not a bezoar stone. Again, whatever defect there was in the horse, it was manifest at the bargain, and the plaintiff directed his attention to it. And it was well known that defects apparent at the time of a bargain are not included in a warranty, however general, for the simple reason that they can form no subject of deceit or fraud. A party who should buy a horse knowing it to be blind could not sue on a general warranty of soundness. There can be no deceit where a defect is so manifest that parties discuss it at the time. *Mr. Norris* also contended that the identity of the horse had not been proved. It had not been shewn that the horse purchased of Batt was the horse pronounced by *Mr. Croley* to be a roarer, or the horse sold at *Mr. Fisher's*.

Under all the circumstances, he felt persuaded the Jury would do their duty, and return a verdict for the defendant.

His Honor, in summing up, having disposed of the legal points

dwelt upon by Mr. Norris, said the principal question the Jury had to determine was, whether a warranty was given, and to that two witnesses had distinctly sworn; then, whether *roaring* was unsoundness; and that it was so, had been long since held. With regard to the identity of the horse, although stronger evidence might have been given, there could be very little question. Then, if they were satisfied as to the warranty and the unsoundness, the plaintiff had disposed of the horse (the defendant having refused to refund the money originally paid) in the only legitimate way, and was undoubtedly entitled to recover.

The Jury, however, after a few minutes' deliberation, returned a verdict for the defendant.

[We understand that the plaintiff intends to apply for a new trial, and he will, no doubt, obtain it.]

Devizes and Wiltshire Gazette.

* * * Our thanks to him who kindly sent us the paper containing this trial.

ATKINSON v. HORRIDGE.

[*Mr. Cartwright* has kindly sent us the following additional particulars of this trial, the commencement of which—and but a very imperfect account—is contained in our Number for last month. The evidence is so replete with veterinary matters, that we have deemed it, together with *Mr. Chilton's* defence, of sufficient importance to reprint.]

Mr. Joseph Dawson called.—I know plaintiff and defendant; on the 3d of October I was at Chester races; I saw the horse Paragon at the Albion stables; he was shewn to the plaintiff; the defendant said he was bid two years before, from three persons, Anderson, Quartermaine, and somebody else, 160 guineas; he then declined shewing the horses out of the stable, as they had just come a long journey; the defendant said he would warrant the horse sound, and a perfect hunter, in fact quite a paragon; I saw plaintiff and defendant next day on the course; the plaintiff said that he had bought the two horses for £210, and he, defendant, wished to take immediate delivery of them, which he thought unreasonable; he wished defendant's servant to take charge of them; the price of the second horse was to be £60; Paragon was warranted.

Cross-examined:—There was no bargain on the first day; nothing was arranged; don't know that the name of the second

horse was "Ecce-caudem" (Behold his tail!). I don't know that he has gone by the name of "Gaman." Paragon is an aged horse; I have seen him on the roads, but never in a run.

Mr. William Clay.—I have been groom to plaintiff seventeen years; I fetched the two horses; I saw the plaintiff at the Albion, who gave me the horses; I saw Paragon out; the defendant said he was a first-rate horse, and that he would want a long preparation; he advised that he should be clipped when he got home; I paid Mr. Horridge £210; he said that if the horse went on well, Mr. Atkinson was to give him £10 more at Christmas, and that if he received it, he would give me something handsome out of it; I took the horses to Leeds by rail; next morning I took Paragon out to exercise; I walked him up the hill, and detected a quickness of breathing in the nostrils; I gave him a canter about a mile; when he pulled up he was breathing again quick. I told Mr. Atkinson what I had observed; Mr. Yates was sent for; the horse was cantered about in his presence; I saw him examined by Mr. Byron; his wind was the same as when I first saw him; I did not find any quick pulsation at the heart; I don't think he was suffering from cold, as he had fed well that morning; I never heard him cough; the young horse was a lame horse.

Cross-examined:—I never heard him cough, whistle, or roar; motion will accelerate pulsations both in man and horse; Mr. Hobson has got the other horse; I heard he ran fourth at the Doncaster steeple chase, but not in a respectable place, he was half a mile after the winner; the papers said it was the quickest run race in the season, but I don't believe all the papers say; the young horse had thrushes.

Mr. Robert Byron.—I am a veterinary surgeon at Bradford; I have been in practice twenty-one years; I examined Paragon on the 13th October 1846, at plaintiff's stables; I had him mounted and taken quietly round the paddock; then a little quicker, a slow canter; he was then let out at full length; he was getting into a gallop from a quarter to half a mile; the result of my examination was, that he was suffering from a chronic affection of the air-passages of the lungs; it goes by the name of the thick wind; the symptoms are a shortening of the breathing, much quicker, and in distress much more laborious; it is not curable; the flanks indicated the same symptoms; the disease impedes the regular circulation of the blood when in distressing exercise; the pulsation did not decrease as rapidly in this case as if the horse was in sound health; I saw the horse twenty minutes, and it had not subsided; in an ordinary cold the circulation, generally speaking, is not impeded in its progress through the lungs.

Cross-examined:—It would be a very extraordinary thing if

this horse could go through a good day's hunting in the front rank with fifteen stone on his back; there is slight inflammatory action with cold; this horse had no cold when I examined him; I don't remember reading that Eclipse was thick winded; he did extraordinary feats; if he was thick winded he was unsound; an alteration of structure having taken place constitutes unsoundness.

Re-examined:—I have known thick winded hunters perform extraordinarily well on particular occasions.

Mr. Edward Yates.—I am a veterinary surgeon at Leeds: I examined Paragon on the 7th of October last. He breathed much quicker than he ought to have done with the exertion he had had; I remained about half an hour with him; his breathing when I left was at the rate of twelve to thirteen respirations in a minute; the respiration of a sound horse would have been from six to seven per minute; I believe the horse was suffering from being thick winded; it is a permanent disease, and incurable; it may be improved by getting a horse into condition for hunting; the horse was not suffering from active inflammation at the time; he had a regular pulse at the time, it was about forty; if the respiration had been from inflammation, the pulse would not have been less than fifty-five; he had no cold or cough; the horse would be equal to a moderate day's work in the field with good training and diet; if ridden too hard there would be danger of thick wind.

Cross-examined:—I could spell re-spi-ra-to-ry on the 7th day of October last; in a healthy horse there are from six to seven pulsations to one respiration, when quiet.

Mr. James Moore.—I am a veterinary surgeon at Leeds; I saw this horse in November last at Young's livery stables; I was shewn him by one of the grooms.

Mr. Chilton objected that this did not identify the horse.

Clay recalled—The horse was taken to Young's stables. I saw him there on the 30th of October; Young has stalls for one hundred horses; he is a bay horse, and he was in a loose box; I did not shew the horse; Mr. Young saw the horse.

Mr. Moore recalled—I saw the horse in a loose box distinct from any other; I saw the horse a second time when Mr. Young was there; Dr. Hepper was with me; I had told him that I thought the horse was to be sold that day, but I was in error; I was at the sale of the horse, at Young's stables; his merits were descanted upon very largely; he was named, Paragon.

Mr. Chilton objected that there was no evidence of identity. The witness said he had seen the gentleman who bought him, but he did not see him now. *Mr. Townsend* wished Mr. Mann to stand up. *Mr. Chilton* said he must sit down, and the witness must have a hunt for him. The witness with great gravity de-

scended the witness box, and picked out a gentleman named William Thompson Mann.

Mr. Chilton said he had identified the *man*, but not the *horse*.

Mr. Mann called.—I bought Paragon for £56, on account of Mr. Horridge, at Young's livery stables, Leeds; I brought him to Chester.

Cross-examined:—I am about 10½ stone; I have ridden this horse once; we had a nice day's hunting; I was with Sir William Stanley; we met at Hooton; the Hooton hounds are fast; it was a muggy day, and it rained torrents; I went to the hall; the horse went well that day; I certainly considered him a perfectly sound horse; when sold the auctioneer said he was neither a roarer nor a whistler, and for anything he knew he was perfectly sound.

Re-examined:—It is not usual to give a warranty at an auction; I am a nephew to Mr. Horridge; I rode the horse from eleven to two; the hunt was some time in December; we had various runs; the largest burst was twenty minutes.

Mr. Moore recalled.—I had the horse run out down the street; I considered him thick winded; I did not hear him cough; I considered him incurable; he could do ordinary hunting.

Cross-examined:—I call the case chronic disease of the lungs; I have heard of cases where veterinary surgeons can swear they have known such cases where there was no chronic cough; I have known of no such cases.

Mr. Yates re-called:—I have known cases where horses having chronic disease of the lungs have had no chronic cough; I had a mare of my own, which I sold, and she did not cough; I have known other instances.

Cross-examined:—I know of two now in Leeds.

Mr. Byron, recalled by the Judge.—Chronic disease of the lungs is not always accompanied by chronic cough; I have known many instances; it depends upon the degree of excitement.

The letters were taken as read.

The warranty was as follows:—"Sold a bay gelding, Paragon, pedigree as stated to me, by North Star out of Young Mary, by Mowbray, to J. R. W. Atkinson, Esq. Warranted to be sound."

"JOHN HORRIDGE.

"Morben, Machynlleth,

"Oct. 2nd, 1846"

That was the plaintiff's case.

Mr. Chilton, with whom was *Mr. Welsby*, for the defendant, said that he had a most excellent cause to carry him through this long day—a cause not at all touched in the wind. (*A laugh.*) He should shew there never was a more unnecessary action

brought into a court of justice. The defendant made a fair offer that a gentleman and a sportsman should settle the matter between the parties; but that was rejected by the plaintiff, who would have nothing but veterinarians. After going through the plaintiff's case, and remarking upon its weakness, he tendered to both plaintiff and defendant this advice—don't warrant! That was sound advice. Tattersall would not warrant a horse for any man; and some veterinarians would not pass any horse as sound. Men and horses are said to be alike; and some men would not pass any man sound in body, just as the mad doctor, in a remarkable trial, swore that all men were mad. So these Yorkshiremen swore that all horses had a chronic disease in the respiratory organs. The full sole case proved was, that after exertion the flanks did not subside quite as quick as was expected. He remarked with severity upon that part of the evidence in which it was said that chronic disease could exist without chronic cough. He contended that the price of the horse was not proved, as the two were sold for £210; the other horse being good enough to run fourth in a fast-run steeple-chase. He said that he should shew that when the horse was brought back to Chester, he had been examined by men of skill and eminence, who would prove that he was perfectly sound. He alluded to the day's hunting with Sir William Stanley's hounds, as proving him to be sound. He should confirm this evidence by gentlemen who had seen the horse with the Cheshire; and he should also prove that last Chester races this horse was sold to Anderson, the great dealer, for one hundred guineas, being passed sound in wind. This was at the end of the season, when he was not worth so much as he was in October. He should prove all this, and he would then be entitled to their verdict.

Mr. Joseph Bretherton.—I am a veterinary surgeon, residing at Liverpool; I have been in practice twenty-seven years; I have known the horse six years; I examined him on the 8th Jan. last; I had him galloped violently for ten minutes or a quarter of an hour, until he was ready to drop; he was then sound as to his wind; had he had a chronic disease in October, it would have increased; he stood at my stables in March, for seven days, for sale; I never heard him cough; I never knew a chronic affection of the lungs without a cough; the horse was sold from my stables to Mr. Anderson; he tried him in every form first; Mr. Anderson gave £100 for him; I declined examining him myself; I got Mr. Walton to examine him; Mr. Anderson paid the money to me.

Cross-examined:—I don't know that Mr. Anderson knows Mr. Horridge; I have passed the college in London; I was three years with Mr. Lucas, and three at the college; the horse was

fat in January; he was eleven or twelve years old; I sold him myself at four years old; training will not abate the disease.

Re-examined:—There was neither roaring, wheezing, or whistling.

Mr. John Walton.—I am a veterinary surgeon in Liverpool; I have been in business since 1826; I examined the horse Paragon for Mr. Anderson; he was sound in his wind; I put him to the usual tests; he was galloped by my assistant; I am quite satisfied of his soundness; I never knew of a case of chronic disease of the lungs without a chronic cough.

Mr. Charles Speakman.—I am assistant to Mr. Walton; I galloped the horse on the day in question up the hill for ten or twenty minutes; I examined him as to the state of his wind; he was perfectly sound; he could not have had a chronic affection of the lungs on the 7th October last; I never heard the horse cough.

Mr. Daniel Herbert.—I am a veterinary surgeon in Chester; I have been in practice three years; I studied under Mr. Walters; I examined Paragon on the 17th November. I had galloped him in Bumper's-lane, about a mile in length; he is perfectly sound in his wind; he could not have had any chronic affection of the lungs in October; I never heard of chronic disease without chronic cough.

Mr. John Harrison.—I am a surgeon, residing in Chester. In the human frame it is morally impossible to have a chronic affection of the lungs without chronic cough; the same will apply to a horse.

Mr. Wm. McEwen gave similar evidence.

That was the defendant's case.

Mr. Townsend replied at considerable length, and with great ability.

The Learned Judge went minutely through the evidence.

Verdict for the plaintiff. Damages £101 5s.!

From the Chester Chronicle.

GENTLEMEN WHO HAVE RECEIVED THE DIPLOMAS OF THE
ROYAL COLLEGE OF VETERINARY SURGEONS THIS YEAR.

Edinburgh, April 27th.

Charles S. Romanis	St. Petersburg, Russia
Thomas Kennedy	Ayrshire
John Turner	Warrington
Robert Pettigrew	Carlisle
Alexander Ellison	Fain, Scotland
Young R. Graham	Birmingham

Francis T. Collins	Coventry
William Carlisle	Carlisle
Charles J. Maginn	Dublin
George Booth	Dundee
Frederick Atkinson	Cartmel
Alexander Barrowman . . .	Mid Lothian.

April 28th.

Noel Lockwood	York
James Howie	New Deer, Scotland.
Andrew Ritchie	Dundee.

London, April 30th.

Thomas Will. Gowing . . .	Camden Town
William Brown	London
Sargent Terry Harman . .	Arundel
George Harris	Writtle
Richard Skelton	Leyton
Frederick Chamberlain . .	Massingham
George South	London
John Coleman	Tilshead
Herbert H. Heraud	London
Robert Mead	London
Henry B. Greening	Brixton Hill
Walter C. Coley	Holloway.

May 5th.

John T. M'Hugh	Bingham
John Wallis Hobbs	Cerne Abbas
Charles Conacher	Perth
George T. Brown	London
George A. Statham	Derby
Charles Twist	Liverpool
John Fahey	Beechwood
Edward Arundell	Badgeworth
Joseph S. Carter	Halifax
Thomas J. Merrick	Gloucester
Thomas M. Harrison	Garthorpe.

May 12th.

Frederick Hardman	Brighton
James S. Worm	Watton
Andrew Chalcraft	Farnham
George H. Darwell	Pendleton
William G. Reeve	London
George J. Austin	Devonshire.

ALARMING MORTALITY FROM GLANDERS.

[From the Armagh (Ulster) Gazette.]

IT is our painful duty to record several deaths from glanders in human subjects, which took place in the neighbourhood of this city (Armagh), and in parts of adjoining counties, within the last few weeks.

CASE 1.

The first victim in our obituary was a respectable farmer, named Wallace, residing near Killieagh, in this county, who, having purchased a glandered horse in the late fair of that village at a low figure, fell a martyr to his temerity. The animal had been previously condemned for glanders by Mr. Small, veterinary surgeon of this city; but poor Wallace, who was in constant attendance on the horse, under the impression that he only laboured under a cold, caught the infection, and died in dreadful agony after fourteen days' illness, leaving a wife and six children to deplore his premature demise.

CASE 2.

Another respectable farmer, named Reid, residing in the townland of Letmacolum, near this city (Armagh), had a horse in his possession affected with farcy and glanders, from which, in his constant attendance on the animal, he caught the dreadful malady; and, despite the most able medical treatment this city could afford, he fell a victim to the fatal disease on Tuesday last, leaving an aged mother, of whom he was the only support, to mourn his loss.

CASE 3.

Another farmer, also, of the name of M'Cardle, residing near Castleblayney, died of this horrible disease (acute glanders) a few days ago, caught from a horse he had purchased in the fair of Bal-libay the month previous. The awful agony this poor man underwent, before death put an end to his sufferings, was such as to cause his wife and family, with the exception of his eldest son, to flee from him, being in a complete state of the worst climax of delirium; when persons under its influence execrate and detest the presence of those who, in their sane moments, they loved best on earth.

Remarks on the present Prevalence and Danger of the above dreadful Malady.—Having given the above melancholy cases, which have taken place recently within our own immediate locality and sphere of observation, we must add, in justice to the public, that we fear the malady is more extensive and fatal in its consequences than may be generally supposed. And we have reason to believe that a great sacrifice of human life takes place annually from infection caught by contact with glandered horses, the symptoms of which, in their incipient state, are not unfrequently mistaken by human physicians, who may not expect or inquire after the primary causes which led to the affliction of their patients, and treat them as poor Wallace did, in case No. 1, for “a common cold or influenza.” There should be an express Act of Parliament to prevent glandered horses being tolerated as property, which the law now sanctions, and which act should compel the immediate destruction of all animals so affected; and after being examined and condemned by a committee of veterinary surgeons, or one or more of such, properly qualified and paid by Government for their services, when professionally called upon by Boards of Health or other public bodies.

This now dangerous and alarmingly spreading disease, in this country, should no more be countenanced or tolerated than *rabies canina* in the dog; and it should be well understood at the present time, when the keep of the horses of poor farmers is so dear, and must be so meagre, that poverty in the quantity and quality of the food of these animals are great inducements to glanders; and debility and oppression, arising therefrom, are amongst the principal exciting causes of this dreadful and incurable disease, with which horses are long known to be afflicted in seasons of scarcity of food, when they are curtailed of their usual quantum of nutriment, but expected to perform the same amount of labour and service to their owners.

In fine, horses are, this season, dying in great numbers through the country of glanders. In Aughnacloy market, last week, the hides of forty horses, at least, were for sale; when the average used formerly to be about five or six. Our agricultural friends, and other holders of this valuable stock, should weigh well the importance of the facts we have here stated, and of our remarks thereon, as it is not only the loss of property but the sacrifice of human life that is to be dreaded.

*** We thank Mr. Dycer for his attention.

THE VETERINARIAN, JUNE 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

THE impulse of the moment had all but driven us to exclaim, "We wish we had not attended the last General Meeting!"—and even had we, rashly, as some may think, so delivered ourselves, we should have found excuse for the expression of such a feeling in the breasts of those who were present at it. No doubt it was our duty to be there; and yet, as it turned out, for any good that was done, or any business transacted, save the reading of the Report and the Election of six Members of Council in the room of the six going out, we might as well have staid away. And still, four hours and more were consumed by the meeting: and in what? In quibble, cavil, declamation, vociferation, vituperation! In fine, the THIRD ANNUAL GENERAL MEETING must, we are afraid—and with sorrow we declare it—be recorded as any thing but creditable to the Veterinary Profession.

Scarcely had the President announced that sufficient "law" beyond the appointed hour had been given for late arrivals, and that, therefore, the business ought to commence, when, lo and behold! *in limine*, an "objection" was raised to the reading of the Report, on the score of "illegality;" it being contended that no business could be transacted at that meeting save what had been duly advertised in the public papers. The clause referring thereto in the Charter, on which this objection was founded, stands thus:—"And in each advertisement the object of such general meeting, and the day, hour, and place of meeting, *shall be specified.*" Now, the "object" of the meeting was specified in the advertisements—viz., the election of six members of Council. It is true, nothing was mentioned about the Report; nor, in our opinion, needed it to be mentioned, its reading not being a *specific object* of the meeting, but, simply, other business that might or might not

be transacted thereat, by and with the consent of the members then and there assembled. This may be called a shuffle or a quibble : and yet, either in one light or the other, it is worth quite as much as the "objection;" for that, after all, under the flimsy veil of *illegality*, amounted to nothing more than a miserable quibble got up between parties for the express purpose of throwing obstacles in the way of the day's proceedings, and casting reproach in the teeth of those mainly concerned in carrying such proceedings forward.

Pending the shuffle, up rose the President, and, with manly denunciation of such artifice, put an end to all further nugatory discussion by proclaiming silence for the reading of the Report. This, being lengthy, occupied a good half hour or so. No sooner, however, was it ended, than, as if no attention whatever had been paid to its contents, complaints, all at once, burst forth that it had not been sent to members of Council in time for their consideration, and, that now it had come forth, it was this, that, and the other; in short, every thing that was bad, and any thing but what it ought to have been.

In the eyes of those, however, who sat and listened to the reading with minds as unprepossessed with party opinion as they were undisturbed by party feeling, the Report was pronounced to be the best that had yet issued from the Council. It was, what its own words declared it to be, "a record of facts;" and those "facts" were sterling ones—were, indeed, of such import as, in the course of them, clearly shewed that, had matters not been judiciously managed, the chartered College would not have stood, as it now stands, safe and firm upon its *representative* foundation. It was, therefore, with evident feelings of pride and satisfaction that the portion of the General Body of the Profession present declared their entire approbation of the conduct of counsellors, at once so able and so honest, by triumphantly carrying the Report by a majority of 26 against 4!!

It will be remembered that in our number for November last (vol. xix, p. 643) we ventured, for reasons stated at the time, to suggest that some modification or alteration of the apprenticeship

clause—in other words, some *substitute* for it—might be discovered; and that, with such impression on our mind at the time, we became emboldened to pen, in the shape of a bye-law—“ that (in lieu of the three years’ apprenticeship required) the candidate (for examination) shall bring satisfactory proof (in the form of certificate) of his having been engaged in the acquirement of professional knowledge for not less than THREE years, during two of which he must have attended the lectures delivered at the Royal Veterinary College of London, or at the Veterinary College of Edinburgh, or such other school as may hereafter be sanctioned by the Charter.” Remembering all this, we were, as our readers will imagine, not a little pleased to read that, in lieu of the three years of apprenticeship, the new bye-laws—as printed in our present Number—provide *FOUR sessional years’ attendance at the practice and lectures at the Colleges* :—thus, leaving but a year, in opinion, between us; which with all our heart we are ready to concede to the superior wisdom and prudence of our fellow-counsellors. There are some other important alterations in the bye-laws, and judicious ones, as they appear to us at a cursory glance. We have not time, however, to look into them now: on another occasion we will do so.

We return our thanks to Mr. Olden for his account and drawing of an apparatus for the safe and effectual administration of æther. It was what was much wanted; and from his description, and our own notions on the subject, we must confess we entertain sanguine expectations of success. One point Mr. Olden, certainly, has thrown useful light upon; and that is, that we must not wait for coma or insensibility—for the animal’s falling—but commence our operation “ as soon as the pupils dilate, and the respiration becomes slow and long drawn.” We shall be glad to hear from Mr. Olden again on this interesting subject; and from Mr. Poett as well, should he favour us.

We congratulate the members of our College on the re-election of Mr. Thos. Turner as their President. We have had reason, on

a former occasion, to remind the profession, that they are under no light obligations to this gentleman for his watchful conduct over their interests, as well as for the steady, stanch, and successful manner in which he has, aided by the Council, hitherto resisted every attack upon their Charter. For four years has he battled with the *objectionists*; and for fourteen more, if called for, will we take on ourselves to say, is he willing to do so: though, it is to be hoped, to no such demands as have been made upon it, will his time, so much wanted for his own practice, be again subjected. Our good Secretary, likewise, we are most glad to see in his former place. We know full well his seat has not at all times been in a "rocking chair:" with us, however, he will look forward to less stormy days. The conferrence of the honour of Vice-presidentship upon the revered elders of the profession, not members of Council, we hold to be a move in the right direction.

ROYAL AGRICULTURAL SOCIETY.

VETERINARY CHARTER AND GRANT.

THE following Report from the Veterinary Grant Committee was read and adopted:—1. "That it be recommended to the Council, that the name of the Society shall not be used in the petition for the proposed charter; and also that the Duke of Richmond be requested to see the Secretary of State for the Home Department, and express the wish of the Council, that in the event of any charter being granted to any part of the veterinary profession, the Society may have the power to appoint an examiner. 2. That the Council be recommended to give notice to the Royal Veterinary College that the grant will cease at Michaelmas 1848. 3. That the Council be recommended to appoint a committee for the purpose of taking into consideration the best mode of carrying out the object of the Society in reference to the application of veterinary science and practice to the diseases of cattle, sheep, and pigs, and of expending the £200 per annum devoted to these objects in the most efficient and satisfactory manner."

The Council ordered that a copy of this report be forwarded by the Society to the Governors of the Royal Veterinary College.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL
COLLEGE OF VETERINARY SURGEONS.

Sitting of April 28th, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. A. CHERRY, HENDERSON, ERNES, CHERRY, sen.; MAYER, and GOODWIN.

THE Minutes being read and confirmed,

The Bye-laws, which came under consideration at the last sitting, were now severally brought forward for confirmation: they were all confirmed, several unanimously; the others with only a single opponent.

The Treasurer's (Mr. Field) report on finance was then read, and a few remarks passed, when

Mr. Arthur Cherry moved, and *Mr. Mayer* seconded, that the report be confirmed; which was carried.

Mr. Mayer moved, that a vote of thanks be tendered to the Treasurer for the attention he had bestowed on a matter of such importance.—Carried.

Several letters were read and disposed of.

Adjourned.

Sitting of May 20, 1847.

A Special Meeting, called by the regulations of the Charter, to elect the officers for the year ensuing.

Present—the PRESIDENT, the SECRETARY, Messrs. ROBINSON, FIELD, HENDERSON, MAYER, sen.; JAMES TURNER, SILVESTER (St. Albans), BAKER, ARTHUR CHERRY, BRABY, and ERNES.

The Minutes being read and confirmed,

The President, ere he retired from office, detailed at some length, for the benefit of the Council, the result of some important interviews which he had had with high and influential parties, and of most important interest. Under present circumstances it would be premature to promulgate matter which cannot as yet be considered in a state to warrant publication.

Mr. Field, after speaking in high terms of the efficient manner in which the duties of the President had been performed, and the zeal and energy which had been displayed on all occasions, proposed that Thomas Turner, Esq., should be the President for the ensuing year.

No other nomination being made, the required form of a ballot

was gone through; and the result was an unanimous election of Mr. Thos. Turner, who returned thanks for the honour done him, by being now elected President for the fourth time.

Mr. Arthur Cherry proposed that a portion of the number of Vice-Presidents should be chosen annually from the country practitioners of standing and repute, and that the other portion be elected from the metropolitan body; to be ready to act immediately, should it be rendered necessary by the absence of the President. He proposed the names of four gentlemen as fitted to fill the office of Vice-President; viz. Messrs. Mills (of Nottingham), Watts, sen. (of Dublin), Peach (of Wentworth), and Constant (of Edinburgh).

Mr. Gabriel proposed that Professor Sewell and Mr. Henderson be also Vice-Presidents.

A long, animated, and general discussion ensued, in which no opinion contrary to the object stated in Mr. A. Cherry's proposition was given. Mr. Mayer alone proposed that the numbers should be equal. A few other names were proposed. On proceeding to a ballot, the following gentlemen were elected:—

Mr. Mills, 10 votes; Mr. Peach, 10 votes; Mr. Watts, 9 votes; Professor Sewell, 9 votes; Mr. Henderson, 8 votes; and Mr. Constant, 7 votes, these being the highest numbers.

Mr. Arthur Cherry proposed that the present Secretary, Mr. Gabriel, should be re-elected, as, from the very efficient manner in which that gentleman had discharged the duties of an arduous office, his loss would be a most serious one.

Balloted for, and without any opposition re-elected.

Mr. Arthur Cherry gave notice of motion regarding the annual election of Committees.

Adjourned.

MISCELLANEA.

AMERICAN MODESTY IN VETERINARY SURGERY.

THE Subscriber respectfully informs the public that he has been turning his attention to the treatment of the diseases of horses: he has possessed himself of one of the best English works on the subject now in use, and he has endeavoured to make himself master of the veterinary art. He holds himself in readiness to attend to all calls in the line, confident that he can give complete satisfaction, and remedy all cases that are not remediless.

JOHN UNDERWOOD.

Clinton, Feb. 4, 1847.

31—3m.

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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

[Continued from p. 251.]

SYMPTOMS OF NAVICULARTHRITIS.

THE FIRST OR EARLIEST SYMPTOM OF NAVICULARTHRITIS, according to Dr. Brauell, *is pointing of the foot*; though, from the unlikelihood of its being discovered or attracting notice, or from the little heed that is taken of it, supposing it to be observed, so long as the horse continues to go sound, it has in general escaped mention as such. Commonly,

LAMENESS IS THE SYMPTOM WHICH FIRST STRIKES ATTENTION. Now, lameness may make its appearance on a sudden, or it may come on by degrees: in the former case it being often intense in the first instance; in the latter, ordinarily slight, and mostly transitory.

A horse shall quit his stable for work or exercise in his usual state of soundness, but while out shall drop suddenly lame. At the moment, his rider or driver imagines he has trodden upon a stone or picked up one, and under such supposition hastes to inspect the foot. No stone, however, is found in the foot,—no signs of one having been lodged there. The horse, unable to pursue his journey, is walked home, probably has his shoe taken off by the farrier, and his lame foot examined. Still, nothing is discovered to account for the lameness; neither is there any perceptible swelling or heat about the leg. The horse not recovering his soundness, some veterinary surgeon is called in, and the mystery becomes cleared up. Numerous instances might be adduced of this occurrence: one will suffice here.

A very sound fine-actioned horse, twelve years old, ridden by
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one of the guards forming the escort on the occasion of the Queen going to open Parliament in February 1839, suddenly fell limpingly lame. His feet were, in appearance, of the healthiest description; naturally rather oblong than circular, but particularly strong, sound, and good. The shoe was taken off his lame foot on his return home, but nothing was discovered; and yet the lameness, from the action, and the absence of all other apparent cause for it, was supposed to have its origin in the foot. The shoe was left off, and the foot immersed in a cold poultice, and a dose of physic was given. In a week, on the shoe being re-nailed on, the horse proved sound, and was returned to his work. A month had not passed before he was brought back, lame again in the same foot. And as the symptoms of navicularthrititis had now unequivocally manifested themselves, he was subjected to the usual course of treatment for such disease.

Nothing is more common than for certain descriptions of military horses, while engaged in charges and other rapid movements upon hard and unequal ground, to fall lame in this manner; and particularly for such horses to do so as have failed from navicularthritic diseases on occasions before. And, in private practice, Mr. Spooner, V.S., Southampton, has recorded (in vol. vi, p. 40-41 of THE VETERINARIAN) some cases of the same kind well worthy perusal. There is also a case, excellently in point, related by the late Mr. Castley, in vol. ii, p. 493-4 of the same journal.

In the ordinary way, however, the lameness arising from navicularthrititis is gradual in its development, insidious and stealthy even. At the beginning the horse is imagined by the rider or driver to go lame; while out he *fancied* his horse now and then went gingerly, or dropped upon one foot; and on his return home, with the unpleasant impression upon his mind, examines his leg and foot,—perhaps has the shoe taken off. Not making discovery, however, of any thing amiss, he begins to console himself that his apprehensions were but imaginary; and, finding his animal the next morning in his wonted state of soundness, feels persuaded that the affair altogether was but a phantasm: his “wish,” no doubt, being “father to the thought.”

The next journey or rapid work the horse performs brings back the lameness, and now it assumes more the form of reality, and does not pass off so quickly again. Still, give the horse rest, so that he can repose his lame foot, and the lameness is likely to pass a second time away; or, at all events, to become so much diminished that little or no heed is taken of the little “favouring” that remains, supposing it does not altogether escape observation. In this way I have known, even under ordinary carefulness, days pass away before the horse was thought to be ailing: under other

circumstances, weeks may elapse; nay, when heedlessness or indifference prevails, months may run on before the lameness is regarded as "bad enough" to lay the horse up.

In the end, when work is persevered with, the lameness, although at first but slight and transient, cannot fail to become unremitting and severe; and it is very possible, as I have already shewn, that it may be so from the very beginning. In either case the horse, we will say, finds his way to a veterinary surgeon; and his examination elicits such proofs of the existence of navicularthrititis as I shall now particularise.

THE GAIT OF THE LAME HORSE is to the experienced veterinarian demonstrable that the lameness is not of the *shoulder*. I do not mean to say it is quite impossible to mistake, by the gait, shoulder for foot lameness, and *vice versâ*; but I contend that, to the man of observation and experience, it is but rarely that any doubt in such respect will present itself; and that when it does, such doubt is commonly resolvable by tests beyond those of simply running the horse forward and back again: what these tests are will come under consideration when we are on the subject of *shoulder lameness*. But there is a gait likewise which, though not peculiar to navicularthrititis, tends very much to confirm our diagnosis when, from other symptoms, we have reason to believe the disease is present. While the animal projects the lame limb with less freedom and boldness than its fellow, he endeavours to tread upon the toe of the foot and save the heel; and in trying to do so turns the foot in, at the same time that he steps short with both feet. And now and then, as he is trotting along, he will suddenly drop most perceptibly upon the sound limb—shewing lameness at that time evidently enough, though perhaps he shewed it but doubtfully in running straight forward: in a step or two, however, he recovers himself, and goes again as little lame as before. Inspection of the shoe taken off the lame foot—testimony of action too much disregarded—will shew by the marks of wear upon it the manner in which the animal has been in the habit of treading with the lame foot—how much, in fact, the toe is worn in comparison with the heels. The circumstance of the lameness being aggravated by work and diminished by repose, taken into account with this kind of action, enhances the value of any inference we may deduce from action alone: at the same time such evidence as this is not to be relied upon to the exclusion of symptoms of more importance.

There being no swelling nor heat or other sign of disease or injury discoverable in the leg, or other parts of the limb, is negative evidence, in addition to the foregoing, that the foot is in fault; therefore,

THE FOOT SHOULD NOW BE LOOKED TO. Its general aspect, probably, is that of round and compact, approaching to clubby, such as has been afore described; perhaps rimmy as well around the wall, which beneath the coronet exhibits a remarkable shelving or falling-in; a "stricture," as Mr. Turner has denominated it; perhaps, also, there is to be observed contraction of the heels, with a strange falling off in the natural prominence of the quarters: I say "perhaps" to these appearances, because in a case quite recent, and a first attack, all of them may, and most likely will, be absent—the hoof will present literally its normal aspect; though when the horse has been any considerable time lame, and when the lameness proves to be a second or third attack, such anomalies are likely to be sufficiently marked to strike our observation.

The shoe being taken off, the foot is examined in other parts, by means of the drawing knife and pincers. It is possible, after all, the case may turn out one of prick by a nail, or of the nail being driven too "coarse," or of the foot being "bound by the shoe." Nothing of the kind we will say is demonstrable. The sole cuts out dry and hard, and proves to be thick and strong, and requires a great deal of its substance to be pared away to make it "give" under the pressure of the thumb; and when a sufficiency has been pared away to produce this effect, the frog, left isolated as it were, surprises us by its depth and prominence, while the sole itself, through so much paring, has become an arch of striking height and concavity. This is the state of hoof that constitutes what Mr. Turner has called "occult contraction;" and to which that gentleman has attached so great import in the production of navicularthrititis: his words being—"The occult or partial contraction abruptly opposes the navicular bone in its descent, and thereby crushes or bruises the delicate synovial membrane lining the joint, which suffers mechanical injury from the very material which nature bestowed as a defence, and which has degenerated into a hard, rigid, inelastic protuberance, no longer capable of yielding and expanding under the superincumbent weight." And in order that we may detect any difference there may exist in this particular between the two fore feet, Mr. Turner very properly recommends that *both* fore feet of the lame horse be unshod and similarly pared out. I may, however, say of this symptom as I said of other alterations or anomalies in the form and aspect of the hoof—that it is one which belongs to the chronic or relapsed case, and not to the recent one. Pending this investigation into the state of the foot, we may, with a view of throwing additional light on the nature of the case, put some questions to the master of the horse or his groom, and it behoves us to be very particular in putting the all-important one,

DOES THE HORSE POINT THE LAME FOOT? i. e. does he stand in his stable with his lame foot placed in advance of the other? Indeed, it not very unfrequently happens that the animal at the very time he is brought to us for advice, will, while his master or groom is relating his ailment, stand all the while in our presence with his foot *pointed*: revealing, as it were, himself the nature of his malady at the very time it is being inquired into. Dr. Brauell, as I said before, declares pointing to be the *earliest* indication of navicularthritus; and for my own part I think this very probable, notwithstanding it seems not to have attracted notice as such by our own veterinarians. This will hardly be wondered at, however, when we come to consider that lame horses are brought to us out of other persons' stables, and that pointing with many horses, especially on a first or recent attack, is a symptom by no means so ready of detection as many may imagine, even after lameness is set in; and therefore it is no uncommon thing for pointing to be denied altogether, both by the groom and master of the horse. Mr. Turner has cautioned us against being deceived by such representations. "My rule," says he, "is never to place reliance on this statement; and therefore on a quiet examination in the stable, *unobserved* by the animal himself, I generally catch him in the fact: probably not extending the lame foot out a yard before him, but projecting only about a hand's breadth beyond the other foot," &c. In making such observations, however, and drawing our conclusions from them, it must be borne in mind that there are horses quite free from lameness who point the foot from habit—who stand so for ease—make it, in fact, their natural standing posture. Horses in years, and who are stale on their legs, sound though they be in their work, very often get into a habit of what is called "shifting their legs" in their stalls, i. e. standing first upon one foot, then upon the other, *pointing* or resting them by turns. It is but natural that the animal should point the foot in pain, or, in other words, take his weight off it, the same as we find another horse doing whose foot has been pricked in shoeing, or has picked up a nail; and this it is that makes pointing a symptom of so much importance in our diagnosis. We appear to be assured by it, that, whatever the malady may be, the *foot* is the seat of it; and that we may make this assurance doubly sure in our diagnosis, we must ascertain that it is invariably with the same foot the pointing has been observed.

HEAT OF FOOT, though one of the ordinary symptoms of navicularthritus, will not be present in every stage of the lameness. When a horse, for example, falls lame on the road on a sudden, the cause of lameness not originating in inflammation—which as yet has not had time to set in—it cannot be expected that heat should be present. Neither will it be found in certain chronic

stages of the disease, wherein lameness is rather the consequence of altered form and structure than of inflammatory action. Indeed, in navicularthritic disease in general the inflammation present seldom runs beyond what we call the *sub-acute* character; and therefore does not give rise to any very great deal of preternatural heat of hoof. Another circumstance accounting for the little heat that is to be detected in navicularthrititis is the thickness of substance, and consequent distance, there is between the seat of disease and part to which the hand can be applied—the wall of the hoof or the sole: the latter, after being pared out, being, in point of fact, the nearest point to the navicular joint. After both soles have been cleaned out, Mr. Turner informs us, he has generally detected “an extra-proportion of heat in (that of) the lame foot:” adding—“but the throbbing of the pastern arteries is a more important criterion.” Usually, also, there is some augmentation of heat, and of fulness with it, to be perceived around the coronet: a symptom that seems natural enough when we come to reflect on the vascular composition of the coronary substance—on the quantity of blood it must always contain, even when the foot is in health, and to what extent that quantity is likely to become augmented under disease. The fulness around the coronet will account for the appearance of sinking or falling-in which the hoof of the lame foot presents. It will also serve to explain the origin of the *rimminess* which the hoof in after days is so likely to exhibit: the secretion of horn (which takes place in the coronary substance) being naturally much influenced under congested and inflammatory conditions of that vascular substance.

RELAPSE. Careful inquiry should be made, and carried back as far as it conveniently can be, with a view of ascertaining whether the present be a first or second or third attack of lameness in the same foot, and whether or not any thing of the kind has ever happened to the opposite fore foot: the very circumstance of *relapse*, from the known tendency of navicularthrititis to return, adding important weight in the consideration of symptoms, to say nothing about the influence it must necessarily have over prospects held out in the treatment of the case. No lameness is so apt to return as that arising from navicularthrititis. Were a person a hundred miles off to write a letter to a veterinary surgeon, saying, “My horse goes lame, and I can discover no cause or semblance of cause whatever for the lameness;—there is nothing particular to be observed in his action to lead to a belief that it is shoulder lameness;—once or twice he has through repose become sound again, though lameness has not failed to relapse every time he has been returned to work again—and in the stable, and often out of the stable, the horse points his lame foot;”—I say,

were a person to write thus concerning his lame horse, any veterinary surgeon to whom he wrote might, in his own mind, without any great apprehension of being mistaken, set the case down as navicularthrititis.

Commonly, the lameness relapses in the *same* foot; now and then, rarely until it has several times returned, the fellow fore foot contracts the disease; and when it does, the first stone may be said to be laid for the foundation of *grogginess*: a sad termination, which, even by the most judicious and prompt treatment, can but be deferred for a longer or shorter period, rarely or never averted. After slight and cursory treatment, though the lameness be removed, should the horse be put *immediately after* to work, the probability is it will return: the only safeguard we know being energetic treatment at once, and that followed up by sufficiency of repose. There is more probability of a horse standing sound in his work after a first than after a second attack: and yet I have known many instances of horses standing their work after relapse, particularly when the second attack has occurred at no long interval of time from the first. When, however, a horse comes to experience a *third* attack of lameness in the same foot, but little reliance can be placed on him afterwards. He may, and probably will, by proper treatment and rest, be restored to soundness again; but not, I should fear, to *stand*. I can hardly recall to mind an instance where a third attack has not been succeeded by a fourth, and that by a fifth and a sixth: irremoveable lameness in one foot, or in both (grogginess) being the final catastrophe. To give a few examples, with the view of shewing how, in general, such cases proceed to their end, in army practice at least:—F 3, troop horse, was first attacked in June 1836; secondly, in February, 1837; thirdly, in June 1837; fourthly, in October 1837. C 6, another troop horse, was attacked, first, in July 1843; secondly, in March 1844; thirdly, in May, 1844; fourthly, in February 1845; fifthly, in September 1845; sixthly (and now in the opposite fore foot, as well as in the original lame one, becoming, in fact, “groggy”) in May 1847. G 5, troop grey mare, attacked, first, in September 1845; secondly in April 1846; thirdly in July 1846; fourthly, in December 1846; fifthly in May 1847; and still lame only in one (the near) fore foot.

Making a calculation of cases which have occurred under my own observation within the last twenty years, I find that in army practice a ratio of about one case of first attack in six or seven may be expected to relapse. In private practice, for sundry reasons which need not be mentioned here, the proportion of relapses I should expect would be much greater: though, of course, in both situations relapses must be greatly dependent on circumstances.

In respect to the likelihood of relapse, or to the interval of time at which we may look for the return of lameness, that must depend on the nature of the "cure" achieved, as well as on the kind and intensity of the work the horse is either put to at once, or gradually inured to perform. Prompt and energetic treatment, succeeded by long repose, and a *gradative* introduction to work, avoiding all such kind of exertion as is likely to jar the fore feet much, affords the best chance of permanent soundness. In military veterinary practice we know pretty well in what seasons, and months even, we shall have occurring cases of navicularthrititis. In the spring of the year, or as soon as field or road work commences, and especially at times when the exercising grounds have become hard and dry from want of rain, we are certain to have lame horses. "Screws" which have been loose before become now loose again, and fresh cases make their appearance: such of them as relapse again commonly shewing lameness at intervals of three, six, and twelve months; they being the periods of time at which the cases, according to their nature and the season at which they have occurred, are usually sent to work again.

MELANOSIS.

By W. HAYCOCK, Veterinary Surgeon (Member of the Veterinary College Edinburgh), King Street, Huddersfield.

MAY 5th, 1845, I was requested to give my opinion respecting a disease affecting a grey mare, belonging to a Mr. R. H., of Honley, near Huddersfield.

History, &c.—The animal is now fifteen years of age,* three-parts bred, stands fifteen hands high. Formerly was much darker in colour; but during the last three years the hair generally over the entire body has become much whiter. The animal has been in the hands of the owner twelve years, during which period she has never been affected with disease of any kind, until about four months ago, when a small tumour made its appearance immediately over the articulation of the inferior maxilla, which tumour has so increased in size, that the owner is desirous, if possible, of having the animal relieved. I accordingly made a careful examination, and found a large tumour upon the left side of the head, together with a smaller one situated at the top of the neck on the same side.

* That is at the time I was called to the case.

Large Tumour.—Its inferior border runs from the fossæ above and behind the outer canthus of the left eye, extending backwards over the superior part of the parotid gland, where it terminates abruptly. The tumour completely covers the zygomatic process and the maxillary articulation; it is firmly fixed at its base—it is lobulated, and very little elastic, except in the central part. It measures seven inches from its anterior to its posterior extreme: it is not painful, neither is the temperature of it greater than any other part; its presence, however, evidently impedes the free motion of the jaw in mastication, for mastication is performed very slowly, and the jaw is greatly limited in its action.

Small Tumour.—The small tumour is situated at the supero-inferior part of the left side of the neck; immediately behind the curve of the inferior maxilla, and between the bifurcation of the jugular vein. This tumour differs from the other in not being lobulated, and in allowing of a certain extent of motion when handled. The space between the tumours and the whole of the left side of the cheek and face down to the lips is swollen.

I next examined the mouth, teeth, &c., but all were in a very healthy condition. The pulse beat 38 per minute, and the respiration was natural. I did not give a positive opinion as to the nature of the affection at this time; but from the colour of the animal, AND FROM THE FACT OF THAT COLOUR HAVING CHANGED FROM DARK TO LIGHT—from the age—from the manner in which the tumours commenced, and their gradual growth to the present time—and, lastly, from the absence of inflammation, I told the owner I believed the disease would prove to be *melanosis*. I refrained from all treatment, with the exception of having the parts fomented twice or thrice daily until I saw the animal again.

I did not see the case again until the 2d of July, when I found an alteration for the worse had evidently taken place.

The larger tumour has increased in every direction; it now extends down the cheek, passes under the inferior maxilla, and fills the submaxillary space, and finally appears to terminate at the root of the ear on the right side of the head. The second tumour has also greatly increased in size, and, from its situation, it appears to press upon the larynx and superior portion of the trachea. The animal is worn to a mere skeleton, caused not so much from constitutional disease as from inability to masticate food. When the mare attempts to eat, the food is first gathered very slowly into the mouth; the head is then inclined to the right side, and maintained in that position while she endeavours to masticate it, which appears to be entirely done by the molares of the right side: a similar difficulty occurs in swallowing the mass. The muscles on

the left side are atrophied, including those of the lips; and running towards the tumours, in every direction, are a number of veins, of about the size of a small goose quill, which appear to terminate, in fact, in the tumours. The large tumour is more elastic than before, and, upon inserting a lancet deeply into its substance, and withdrawing it, I found it to be covered with a coating of inky-looking matter, and immediately a small stream of the same colour issued from the opening, and ran down the tumour: this determined the case decidedly as being one of *melanosis*. The pulse was 60, and the respiration was difficult and laboured. Having thus satisfied myself with respect to the nature of the disease, I at once, from numerous reasons, come to the conclusion that the case was a hopeless one, and told the owner to that effect, who consented to have her destroyed; and, upon my expressing a desire to have the head and neck for dissection, he kindly promised it to me, so that I am enabled to furnish the reader with every particular respecting this interesting case. On the 11th I received the head, and at once proceeded to make the necessary dissection.

External appearance of the head, &c. when laid upon its right side.—Between the frontal suture, the curve of the inferior maxilla, and the supero-inferior part of the neck, three irregularly-formed tumours or masses are presented to view. The first and largest of the three is situated on the superior and outer part of the head, measuring between the root of the left ear and the outer canthus of the left eye eleven inches, and from the insertion of the abductor aurem muscle to the frontal suture thirteen inches: the inferior part of this tumour is much lobulated. Immediately below the above, and situated upon the curve of the maxilla, is the second tumour, which also is lobulated and irregularly circumscribed. Below this again is the third mass, which presents the same characters, and occupies the angle formed by the junction of the neck with the head.

Dissection.—On removing the skin, a dark transparent blue colour is exposed, which soon changed to almost black, after a little exposure to the air. The posterior part of the large tumour passes under the abductor aurem muscle—its supero-anterior part under the triangular cartilage of the ear, under the adductor aurem and temporo-auricularis internus muscles. On the removal of these, I exposed the temporal muscle, which muscle (in all cases in the horse) is covered with a glistening yellow tendinous substance, beneath which again the deposits were extended: they were not, however, limited to the cellular tissue in immediate contact with the tendinous portion, but the lower part of the muscle in immediate connexion with the cranium was filled with globular por-

tions also. The masseter muscle presented precisely the same appearance, only the deposits were confined more to the external surface. The masseter muscle is somewhat peculiar in its structure: it is formed of layers of muscular tissue, and between two of these muscular layers is placed a layer of tendinous substance, closely similar to that investing the temporal muscles; and it was between the external layers of muscular fibre and this tendinous structure that these globular deposits were scattered. The middle and lower tumours were connected with the large one by masses of deposit; but the latter differed somewhat from the former. Their more superficial portions consisted of an immense number of the globular bodies, ranging from the size of a pea to a large marble; the smaller of these bodies I could easily detach from the rest: their external investment or capsule was fine and thin, but still of very considerable strength. If a globule was squeezed, the investment did not burst, as might have been expected, but the black matter contained within oozed through: if, on the other hand, this investment was cut and the melanotic matter washed away, I found the tissue of a fibrous character, and apparently inelastic.

The larger globules could not be dissected away without the contents being partially liberated. Towards the base of the two tumours all globular character vanished, and the whole became agglomerated together. *The inferior tumour enclosed within its substance the submaxillary vein of that side; and so closely did it press upon it all around, that the canal of the vein would scarcely allow a small probe to be passed through it; and the vessel anterior to where it was enclosed was full, almost to bursting, with blood.* On proceeding to remove the middle and inferior tumours as I thought from their base, I found that they passed behind and underneath the maxilla: the middle tumour insinuated itself between the jaw and the stylo-maxillaris muscle. I next removed the jaw and found that the whole of the parotid gland on the left had become melanotic, and the guttural pouch of the same side was filled with the melanotic fluid: altogether, the pouch contained more than a pint. The fluid was very black, of about the consistence of bile, and was a most excellent substitute for ink; for, in fact, nearly the whole description of the dissection was written with it into my case book. The left branch of the jaw, between its curve and condyle, had nearly all disappeared: the bone was gone, not, I believe, from ulceration, but from the pressure to which it had been subject both on its internal and external surfaces, thereby causing it to be absorbed. Very little of the internal pterygoid muscle remained, and what was left appeared to have become melanotic. The fibres of the muscle could be distinctly traced, but the natural colour was entirely gone, and

that of a deep black supplanted it. After clearing away the diseased portions which I have described, I came upon a fourth mass, which had partly been covered by those above. This mass was bounded anteriorly by the posterior border of the os hyoides; superiorly by the transverse process of the atlas; inferiorly by the superior part and upper surface of the trachea, and posteriorly by the sterno-maxillaris muscle. This mass was extremely dense and impacted; and by its pressure upon the trachea two effects were produced; first, the cartilages pressed upon were nearly all absorbed; and, secondly, the tube of the organ, instead of being round, had become a flattened oval.

Dissection of the brain, nerves, &c.—Several lobules, from the size of a large horse-bean to a small pea, were situated upon the facial nerve or portio dura of the seventh pair; and in one part of the nerve, about the middle of the cheek, it was so surrounded and enclosed as to be squeezed into a cord-like form*; and a little anterior to this again a lobule lay between the masseter muscle and the nerve, which raised the latter from its bed, and tightened it considerably: the nerve, however, was perfectly normal through its entire course, at least so far as I could examine it with the necessary care.

The par vagum, glosso-pharyngeus, and recurrent laryngeal nerves, were all included or embedded in the fourth melanotic mass or tumour: *the bundles of nervous fibres which constitute the trunks were separated by small lobuli, and the nerves were tightly stretched*; after which the nervous bundles again united, each to its proper trunk, and became lost by passing into the large mass. I could not trace their course through the mass, because the dark fluid flowed so freely at every incision. The substance of the brain was healthy and firm throughout; but at the junction of the cerebellum with the medulla was a quantity of areolar tissue, which contained a great number of minute red and black specks: these black specks were very numerous, but very minute; they presented, in fact, what Dr. Carswell would denominate the "punctiform" character of melanosis. I next dissected the left eye, and found two lobuli, each the size of a large bean, in the situation of the lachrymal gland: these lobuli, by pressing upon the globe of the eye, had altered the natural form of the crystalline lens; the lens resembled a double-fanged molar tooth. All the other structures composing the eye were perfectly healthy.

The organs of respiration, circulation, and digestion, evinced no trace of disease. The heart weighed seven pounds avoirdupois.

Remarks.—The dissection at once explained the cause of cer-

* This nerve is flat naturally in the horse.

tain observed phenomena when the animal was living. First, the difficulty which occurred in mastication, and holding of the head to the right side. Secondly, the atrophied and palsied state of the muscles of the left side of the head and face; and, thirdly, the turgidity of the veins of the same side. If we consider the functions of the facial nerve, the vagus, the glosso-pharyngeus, and the recurrent laryngeal, we shall at once perceive, that, if their force or influence be cut off from the organs or parts to which they are distributed, derangement in the functions of those parts will at once ensue: hence the reason of the disturbance in the respiration and the loss of motor power in the muscles of the left side of the head and face, and, as a sequence to this loss of motor power, the atrophy or waste of the muscles themselves. The turgidity of the veins is also accounted for, from the fact of the maxillary vein being pressed upon so as to prevent the blood flowing towards the heart. A great number of the small superficial veins of the head empty their contents into the maxillary vein; consequently, any thing impeding the flow of blood through the latter would also impede its flow through the former.

In 1813 an individual in France, named Gohier, published some observations upon this disease; and he advanced the opinion "that melanosis probably depends on the increase or diminution of some of the elements which enter into the composition of the body of the white and grey horse, or in some remarkable change in the nature of the secreted fluids. "The carbon which is found in melanosis is too easily separated by calcination to permit us to ascribe the colour of this disease to any other substance*." Professor Dick, I believe, holds a somewhat similar opinion; he maintains that the dark pigment which should be distributed generally through the hair is removed after its formation, and deposited locally, and that thus the dark matter formed in this disease is accounted for; and if I remember aright, he stated, in one of his lectures he published in "The Lancet" many years ago, a paper wherein he had suggested the above opinion. For my part, I do not see any thing absurd in the supposition that melanosis essentially arises from the black or dark matter of the hair being deposited in one or more localities, instead of being distributed over the hair covering the entire body. I am not aware that any cases are recorded of the disease occurring in young horses; neither am I sure that it has ever been noticed to occur so long as the hair generally retained its original shade of colour. In every case I hear or read of, the animal, before or at the time the disease became manifest, was or had been noticed to have become lighter in colour; and if

* Cyclopædia of Practical Medicine, vol. iii.

such is the fact in every case, it certainly speaks powerfully in favour of such an hypothesis. As old age appears, debility, organic and functional, will, as a consequence, supervene; and it is most probable that those functions, the seat of which are in structures remotely situated with respect to the centres of vital force, will be the first to feel the effects of such constitutional debility.

The secretion of the pigment of the hair and the formation of its cells is a delicate process, and requires for its efficient performance strong constitutional energies and a vigorous supply of nutritive matter: now, the vessels which supply the pigment cells with this necessary nutrition are remotely situated both from the nervous and vascular centres, and, consequently, I infer that the effects of organic debility would here first become manifest. It is probable in the present case that the deposit of the dark matter commenced when it began to disappear from the hair; for the melanotic mass, exclusive of the fluid in the guttural pouch, weighed twelve pounds eight ounces avoirdupois; a weight of substance which it is scarcely possible to conceive was secreted from the time the small tumour was first seen to the 11th of July, a period of about six months.

PROLAPSUS UTERI IN A SOW.

By JOHN CLEVELAND, *Farrier, Brampton, near Beccles, Suffolk.*

To the Editor of "The Veterinarian."

Dear Sir,—HAVING been a constant reader of your valuable Periodical for some years, and having elicited many truths and received much valuable information from its pages; and believing, as I do, it to be one of the best works that a veterinarian's library can boast of; and seeing very few successful cases in the treatment of *prolapsus uteri* in the sow; I am induced to send you the following one.

Should you deem it worthy a space in your invaluable Journal, it is quite at your service.

Your's respectfully, &c.

On Monday the 22d of March, 1847, I was requested to attend a sow, the property of Mr. E. Durrant, farmer, in the parish of Redisham, near Beccles, who was discovered by her attendant to be unwell;—to use his phrase, "had something hanging from her hind parts as large as a peck measure." On my arrival I was informed she had given birth to six pigs on the Friday preceding.

On inspection, I found the entire uterus inverted, with its mucous membrane severely lacerated, and in many places torn off.

Seeing no chance of returning it, I at once suggested that the ligature should be put into practice; to which the owner consented. The ligature was applied as far forward within the vagina as convenient, including the ovaries; and then, with a sharp knife, the whole of the protruded uterus was removed. The animal sickened for a few days; then her appetite returned, and she went on well, suckling her pigs for about eight weeks. They were then taken off, and she was sold for fattening.

ON THE DISEASES OF THE HORSES IN CANADA;

In a Letter from Mr. CHARLES PERCIVALL, Veterinary Surgeon, Royal Artillery, now stationed at Montreal, to Mr. WILLIAM PERCIVALL.

Montreal, Lower Canada, April 20, 1847.

My dear William,—IN giving you, on a former occasion, an account of the horses in Canada, I promised, on a future one, to let you know something about the diseases with which they are affected. In now carrying my promise into effect, I will in the first place make mention of such as are *indigenous* or peculiar to the country, and afterwards speak of those to which horses here are liable in common with horses elsewhere; and, in doing this, point to such as are of most or least frequent occurrence. Notwithstanding the vicissitudes of temperature, varying from 100 in summer to 30 below zero in winter, with frequently a difference of 45 or 50 degrees in the course of a few hours, the climate of Canada is, on the whole, favourable to horses; a circumstance probably attributable to the dryness of the atmosphere.

GOITRE, or BRONCHOCELE.

This disease, so rarely seen in England, is one to which the horses of Canada are especially subject, and more so in this part of the country than in the Upper Province, as I shall shew hereafter. The thyroid glands are not unfrequently seen as large as a goose's egg, without the animals suffering any apparent inconvenience, and therefore it is that they seldom undergo any treatment for such swellings. I have under my charge a great many horses with the glands in this state of hypertrophy, which have increased in size every winter since they came under

my observation. Blistering I find to be of little or no service. By perseverance with the iodide of potassium, and making use of the ointment, I have effected a considerable reduction of them, but have not succeeded in getting rid of them altogether. In a conversation I had with Mr. Turner, V.S., in this city, a short time since, he informed me he had seldom seen the *French* Canadian horse affected with this disease, and that it did not commonly affect others until advanced in years, which I believe to be the case, having seen but few young horses with the glands enlarged. Out of eight pure Canadians belonging to the Field Battery at this station, five are affected, and two out of the five to such an extent as to render them very unsightly, but without materially inconveniencing them. The youngest of these horses is thirteen, the oldest sixteen years of age.

Mr. Turner has in several instances effected a complete removal of the enlargements with the hydriodate of potash ointment. In one case the glands were as large as a man's fist, on both sides, and very much interfered with respiration: it was an old horse, a great favourite with the owner, who informed Mr. Turner that the glands had been in that enlarged condition ten years. Notwithstanding, at the end of three months a perfect cure was accomplished.

On my arrival in this country I was, I must confess, surprised to see so many horses with this disease. Out of sixty horses belonging to the Field Battery here, one-half of them had the glands more or less enlarged. In the Field Battery at Kingston, 180 miles west of Montreal, *only one-fourth*; and in the Battery at London, 320 miles from Kingston and 500 from Montreal, *only six* out of the same number. At Kingston the winter is much less severe than at Montreal, and at London a great deal less so than at Kingston; from which one would be inclined to infer that intense cold, or iced or snow-water, has something to do with its production: at all events, there is something more favourable to its production in Lower Canada than at either of the stations in the Upper Province.

SWINEY, SWINY, or SWINNEY.

This is a disease (if such it be) peculiar to the imagination of the inhabitants of Upper Canada, it never being heard of in the Lower Province. It consists in a shrinking or wasting of the muscles of the shoulder or shoulders. In the summer of 1845, when purchasing horses for the artillery, I went to look at a black colt, which I understood was for sale, but was informed he had got the *swinney*. On proceeding to the house of the owner, he

informed me, as his neighbour had previously done, that his horse was not in saleable condition, in consequence of the said affection. On entering the stable, I found the colt in a miserable state from the treatment he was undergoing, having had a hole bored into the upper part of each shoulder with a hot iron, into which had been inserted a piece of fat bacon; in addition to which the shoulder and arm were covered with gréase of some kind, and altogether in such a filthy state, that it was impossible to touch him. As far, however, as I could then judge of him, the horse was lame in the feet.

A four-year-old brown colt, which we purchased last year, being miserably poor and out of condition, was pronounced by an old farmer who saw him to have the "swinney." On asking him if he thought the animal's "malady" was curable, he said it was, if taken in time, and recommended the boring and the *bacon fat*. However, I gave him to understand I should, in the first place, try what good hay and oats would do*.

HEAVES.

The term heaves, derived from the *heaving* motion of the flanks, means neither more nor less than *broken wind*; though the natives insist on its being a distinct disease, which, they say, is produced by giving horses clover hay—"that this is sure to bring on the heaves" sooner or later. All the horses, however, that have come under my observation with this affection, have had the broken-winded cough; that, there is no mistaking. I have heard of horses with the heaves being got saleable by giving them something to quiet the breathing. But, admitting that the respiration may be tranquillized, the peculiar cough cannot be altered; and, consequently, no one but a novice can or ought to be thus imposed upon. Many of the half-yankee fellows in Upper Canada are *smart chaps*; and, if they can succeed in "sticking a horse" with the heaves "into a knowing one," assume to themselves some credit for their roguish ingenuity. The cure for the heaves, they say, is a *hornet's nest*, finely powdered, and made into a drink with beer, spice, &c.

GLANDERS and FARCY.

These are diseases but rarely seen in this country. A glandered horse, indeed, I have not met with since my sojourn here; and

* From this abrupt ending of the account of the said case, it is to be inferred that "hay and corn" did succeed.

Mr. Turner, who has resided fourteen years in Canada, informs me that neither has he seen a single case. And of the latter disease (farcy) only one case has come under my observation.

MEGRIMS,

I am of opinion, is of pretty frequent occurrence, having had a greater number of cases than I can remember in the same space of time elsewhere; which I attribute to the plethoric state of the generality of horses in this country, it being next to an impossibility to keep them from becoming gross and loaded with flesh. Mr. Turner informs me he has had a great many also, and has known several instances, where, from precautionary measures not having been taken, it has ended in staggers and death.

DISEASES OF THE EYE.

The result of my experience is that diseases of the eye are here of much less frequent occurrence also; not having seen a case of the specific or constitutional ophthalmia since my arrival in the country. In addition to which, I may observe, that I have rarely met with cataract, or any tendency to unsoundness in the eyes, in my examination of horses from time to time for the service.

SANDCRACKS

Are by no means uncommon, and frequently take place in winter, from the hoofs being rendered exceedingly brittle by the intense frost. During the months of December, January, February, and March, the growth of horn is very trifling, and the shoes at this time do not require removing oftener than once in six weeks or even two months: one set of shoes will last the whole winter. In addition to the shoes being turned up at the heels an inch high (the outer calking being made quite sharp), there is also a triangular pointed toe-piece, both of which from time to time, as occasion requires, are sharpened afresh. With shoes of this description, as you may suppose, injuries of the coronet, or between hair and hoof, are of frequent occurrence; and I can assure you they often inflict most serious wounds, requiring, from the severity of the weather, the greatest possible care and attention.

P.S.—In my exposition, in my last letter to you, of the cause of there being so many unsound horses throughout the province (principally from lameness), I omitted to make mention of a most injurious custom, one which greatly contributes towards this lamentable state of things, viz. that, in consequence of the gene-

rality of the farmers being too poor to keep the breeding mare in idleness, she is put to work very soon after parturition has taken place, frequently being driven fifteen or twenty miles, with the foal all the time running by her side.

You shall hear from me again soon.

Your's most truly.

ÆTHER VAPOUR SUCCESSFULLY ADMINISTERED PER RECTUM.

By Dr. PEROGOF, of St. Petersburg.

*Translated from the Russian by Mr. CHARLES S. ROMANIS,
Veterinary College, Edinburgh.*

DR. PEROGOF, by experiments with sulphuric ether on the lower animals, has shewn that the introduction of the vapour of ether into the rectum is a surer, quicker, and more easy way of producing insensibility to pain than by the usual way of inhaling it.

Dr. P. states that two ounces of sulphuric æther, introduced into the rectum in the form of vapour, produces in five minutes a greater influence on the body than six ounces introduced by pulmonary absorption into the system, though continued for ten, fifteen, or even twenty minutes.

In ten cases, when Dr. P. had an opportunity of trying the effects on the human body, it succeeded entirely to his satisfaction.

The following are a few of the cases in which he tried it:—

1st. A female, aged seventy years, having had for more than twenty years a fatty tumour on her back, of two feet in circumference, was ætherized. She became insensible in five minutes. The tumour was then removed without any evidence of pain; and for some time after the operation she would not believe it had been removed.

2d. Was a case of parturition. The child was extracted by the forceps, alive, and did well. The operation occupied ten minutes.

3d. Was a person labouring under calculus in the urethra. The stone was in a few minutes extracted.

4th. A female patient had been a few weeks before inhaling the vapour, without any effect being produced, notwithstanding she had, in the space of a quarter of an hour, inhaled the vapour produced by four ounces of æther. This person was rendered quite insensible with only two ounces introduced per rectum.

The instrument used by Dr. P. consists of a metallic tube six inches long and one and a half inch in diameter. A piston works inside, air-tight. At the extremity are two openings, furnished with flexible tubes: upon each there is a stop-cock. One of the flexible tubes is connected with a vessel containing the æther; the other is introduced into the rectum. The vessel containing the æther is placed in water heated to the temperature of 40 degrees Reaumur. When the piston is drawn up, the cock leading to the æther is opened, and the other is shut; when filled, that is closed, and the tube leading to the rectum is opened. The vapour is then forced in by the piston, which is repeated until the whole is introduced. Before commencing, it is necessary to give the patient a clyster of soap and water.

RUPTURE OF THE DIAPHRAGM.

By H. T. BREWER, M.R.C.V.S., Barnstaple.

I SEND the following case for insertion in THE VETERINARIAN, should it be deemed of sufficient importance; considering that publishing a multiplicity of cases, and recording their symptoms, is the only sure way of arriving at a correct diagnosis.

May 12th.—A farm horse, six years old, the property of James Harris, Esq., Vineham, was attacked about seven o'clock A. M. (after having drawn home a load of lime) with what the waggoner considered *colic*; for which he was drenched with warm beer and gin, and afterwards with some Glauber salts, and was bled twice, but not to a large amount. The horse getting no better, about four o'clock P. M. my services were required. I likewise considered it a case of *colic*, and treated it accordingly. About eight o'clock I left him, he then appearing free from pain, and being up, and looking quite comfortable, eating his mash. The pulse, I should have stated, was very little accelerated.

13th.—I saw him this afternoon, and found him fearfully worse. Pulse very frequent; up and down continually; breathing hurried; mucous membranes blanched. I now considered him labouring under an attack of enteritis.

Treatment.—Venesection to syncope; blister the abdomen; give opium, &c.

14th.—No better. Bleeding repeated. Give opium, &c. and repeat blister. The horse occasionally sits upon his haunches.

15th.—To-day he sits a great deal upon his haunches, which, I

was informed, he did frequently during the night. His pulse is very quick; and, while lying down, every pulsation can be heard, even at some distance; a gurgling sort of sound, as if fluid of some kind impeded the action of the heart. From such symptoms, I informed the owner I considered it a case of ruptured diaphragm, and that, of course, there was no chance for his horse recovering.

16th.—Death put an end to the poor brute's sufferings about four o'clock this morning, and at eleven I made the following post-mortem examination:—

There was a thickening of a small portion of the rectum, which was discoloured; there was also a thickening and discolouring of a small portion of the colon. But the cause of death, as I had predicted, was a *rupture of the diaphragm*; the laceration being situated rather inferiorly, and being about seven or eight inches in circumference. About three yards of small intestine had protruded through it, and were floating in the cavity of the thorax; and this portion of intestine was highly inflamed. The other important organs were healthy.

I ought to have mentioned that the horse was subject to attacks of colic, and experienced a very severe one about three weeks previous to the last attack.

Remaining, Sir, respectfully your's.

Barnstaple, June 11, 1847.

EXTRACTION OF A MAL-FORMED CALF—BREECH PRESENTATION.

By Mr. W. A. CARTWRIGHT, V.S., *Whitchurch, Salop.*

10th March, 1847.—THIS morning a cow, belonging to ———, shewed symptoms of approaching parturition. About the middle of the day a man celebrated at assisting cows to calve was sent for.

It was a breech presentation. With much difficulty he got the hind feet up. The calf was then forcibly drawn away in that position.

4 P. M.—The cow not going on favourably, I was sent for. On introducing my hand into the uterus, I found that the upper part of the neck of it was evidently lacerated to a great extent. Scarcely any of the cleansing could be felt, and the body of the uterus appeared to be almost out of reach. I ordered her to be destroyed, and made meat of, she being in good condition.

Examination.—I was informed that, on opening her, the uterus was found to be very badly ruptured. The hind parts of the calf were much contracted, and diminished in size. The anus was impervious. The os femoris on the near side, just below the cervix, and the tibia on the left side, were fractured by extracting the calf. Each of the hind extremities, before they were fractured, must have been lying under the belly or against the sides, and from their having been in this posture, the ligaments of the anterior parts of the stifles had become shortened and contracted; and the femor and tibia formed almost a straight line, there not being the least flexure at the stifle joints. The hock-joints were pretty well in their natural position, but both the stifle, hock, fetlock, and pastern joints were so firmly braced together, that they were completely fixed, and immovable, and would not bend backwards, sideways, or forwards, in the least. On examining these joints, not the least union of the cartilages or bones had taken place; only a shortening of the ligaments of the joints generally, not permitting the usual flexures of the parts. From the contraction at the stifle joints the legs were almost straight, forming only a curve by the metatarsal and pastern bones being drawn a little anteriorly.

Observations.—This is a very instructive and rare case. I remember meeting with a somewhat similar one some years ago, an account of which I published in the 16th vol. of THE VETERINARIAN, page 487; but in that instance the hind parts were large and full-grown. Here they were diminutive. This case proves to us the necessity of ascertaining what size the hind parts are, and whether the joints are inflexible; for, had he known this, of course the best plan would have been to pass a cord round the hind extremities, between the stifles and the body, and to have drawn it out in this position.

He must have well known, even when getting the feet up, that the fetlock joints were inflexible, and also that there must have been something wrong in the other joints, from the great difficulty there was in bending and getting the hind legs out, by hearing the tibia and os femoris break. Had the os femoris only have broken where it was, and the other leg been got straight out, perhaps all might have ended well: as it was, it is highly probable that the uterus was ruptured by the end of the fractured tibia being wedged in and abutting against its neck. I know of one instance where the neck of the uterus was ruptured in two places for two or three inches in extent, merely, in every probability, from the excessive contraction of the uterus on each hip of the calf, when it "stuck fast" in that position.

EXTRACTION OF A LAMB—HEAD AND ONE FORE LEG PRESENTING.

By the same.

ON the 24th March, 1847, an aged ewe, belonging to William Halstead Poole, Esq., or Terrick Hall, began to yearn by presenting only the head, which was entirely protruded through the vagina. I was sent for.

Method of extraction.—I tried to pass my hand up by the side of the neck of the lamb, so as to bring the feet forward; but this I found quite impossible from the smallness of the passage.

I then pushed the head and neck into the uterus, and, after a good deal of trouble, I brought one of the fore legs into its natural position. All my efforts were unavailing to get the other leg into its place without killing the lamb. I now tried to remove the lamb by pulling at the head and one fore leg, and by a little force I succeeded. The ewe and lamb did well.

Extracts from Foreign Journals.

OBSERVATIONS ON THE AGE OF THE OX.

By M. EUG. RENAULT.

[From the "Recueil de Médecine Vétérinaire."]

FEW farmers, not many veterinarians, probably have sufficiently thought on the influence which breed, early weaning, and food, both as respects its nature and quantity, exert on the dentition of domestic animals. Nevertheless, this is a subject no less worthy of attention, from its being a phenomenon full of interest in a physiological point of view, than as casting important light on the order or regularity with which the temporary teeth make their appearance, come into use, and are replaced by the permanent; and as shewing to what extent the latter may be regarded as faithful and unerring signs of age up to a certain period of the animal's life.

Far from me be the thought that such rules relating thereto as have already been laid down by learned and practical men are incorrect. On the contrary, I shall be one of the first to render homage to their labours and researches, their observations, and the practical value of their written precepts. But, for the very reason that these precepts derive great weight and importance from the names of those who penned them, is it the more imperative on me to expose any errors that might be committed at the present day, and most especially as regards oxen and sheep, through the indiscriminate application of them to animals, of whatever breed, in whatever condition, state of growth, &c. they may be. For this reason, I have thought it useful to draw the attention of veterinarians to the subject, and at the same time provoke their observations on it, by publishing the two following letters:—the one, by the manner in which it puts the question, as well as by pointing out the circumstance that gave rise to it, shewing the necessity that exists for inquiry; the other, by the nature of the facts it discloses, being probably designed to prepare the solution of it.

Here are the letters:—

Saint Omer, 25th Aug. 1846.

The Secretary of the Agricultural Society of the district of St. Omer to the Director of the Royal Veterinary College of Alfort.

“M. Director,—A bull of the Durham breed, named ANTINÖUS, purchased on the 15th of April, 1846, at the dairy of the Royal Stud at Pin, on the account of the department of the Pas-de-Calais, by M. Leon D’Herlincourt, member of the Council General, was sent from Arras to St. Omer, at the beginning of June, to be sold there at the public auction.

On the 6th of the said month (June) the animal was presented for adjudication at the court of the sub-prefecture, in the presence of a great number of farmers, who were all eager to do justice to his fine shape, combined with a coat (bay) to which they gave a decided preference; at the same time that they all refused to award the prize to ANTINOUS, because the conditions specified that the candidate should be but two years of age, whereas, from the inspection of his teeth, he was four years old and upwards.

Several veterinarians, former pupils of Alfort, came and corroborated this opinion, declaring that the bull possessed all the teeth of an adult—all his *permanent* teeth.

The consequence of such unanimity of opinion was, that it was deemed impossible to come to any adjudication; and the more so, because in the district of St. Omer, according to the practice of

the whole of Flanders, the old custom is, in regard to the case under arbitration, that *none but very young bulls* should serve cows. This custom is founded principally on the early age at which they break in bulls for work, in order that they may get them fat for the butcher, after having castrated them or not: they also break them in at so early an age, that they may not become vicious.

The conditions imposing upon the highest bidder the clause obliging him to keep the bull for four consecutive seasons for covering, it was not to be supposed that the farmers and breeders would depart from such a regulation when such age appeared proved by the state of the mouth. And, in fact, vainly were they solicited to do so by representations that in England, and many parts of France, excellent progeny was got at a much more advanced age.

This obstinate refusal, founded on age, proofs of which, in the case before them, rested solely on farmers and veterinarians, gave rise to some observations, addressed by the Agricultural Society to the Prefect. This magistrate, in his responsible office, transmits to the Society, through the Sub-prefecture, a letter of M. Leon D'Herlincourt, in which he, having himself purchased AN-TINOÛS at the dairy at Pin, declares that the animal is, in truth, *no more than two years of age*; at the same time that he alleges, as an excuse for their making such an error as to think he is four, *the great precocity of the Durham breed*.

M. D'Herlincourt, in his letter, acknowledges that Antinoüs has lost two of his temporary teeth; but adds, "if the Durham breed nowise differ in this respect from our indigenous breeds, Antinoüs ought to have passed his fourth year. The official list (which represents Antinoüs as calved at Pin on the 8th of March, 1844) would be false. I can, in two instances, prove to you the precocity of dentition, conformably with what happens in the Durham breed, &c. &c."

To which letter of inquiry the Director of the Alfort Veterinary School gives the following reply:—

"Not relying altogether on my own observations (concerning the point in dispute), I have solicited information from the director of the dairies at Pin, from Poussery (Nievre), and from some of our breeders of most repute; among others, M. Turret and M. Massé; and I have gleaned as follows:—

Uniformly, where the ox species has experienced the ordinary kind of management and feeding; wherever food, however good, has been given as ordinary nutriment, and not for forcing or fattening;—in all such parts of the country dentition follows the ordinary course, as indicated by writers on the subject; and we

may, without danger of erring greatly, lay down the ages of such animals according to the following rules:—

From eighteen months to two years, the front temporary incisors are shed and replaced by the permanent incisors.

From two years and a half to three years, the middle temporary incisors are shed and replaced by the middle permanent teeth.

From three years and a half to four years, the second middle temporary incisors are shed, and are replaced by the second middle permanent incisor teeth.

From four years and a half to five, the corner temporary are shed and replaced by the corner permanent teeth.

Such are, in fact, the rules laid down in veterinary works especially devoted to the subject, and by which the most distinguished men of our profession are guided, of which it is easy to be convinced by casting one's eyes over the works on the age of oxen, published by MM. Girard (father), Huzard (son), Cruzel, Bernard, and, more recently, Professor Lecoq.

But these rules, the result of long and accurate observation, and correct and well founded at the time when and in the countries where they were made, are no longer applicable and true in regard to certain individuals and certain breeds.

Indeed, thanks to the progress of agriculture, to a better system of management and feeding of cattle, and to judicious and advantageous crossings, it is certain that, for some years past, many of our bovine races have experienced in their form, and especially in their precocity of development, remarkable ameliorations. Culled provender, given unsparingly at an early age, on the one part, and, on the other, a happy choice of the finest (breeding) stock, either out of the same breed or from strange breeds, have led to such happy results.

Whatever may be the causes of this remarkable aptitude in certain breeds to acquire their growth early, it is readily conceivable that such precocious development cannot be confined to any particular organs. If every part has not equally participated in it, at least they are all affected more or less by it. Above all, the digestive system—the part called on to play an important part in the preparation of such aptitude, since all must essentially result from the nature and action of alimentation—the digestive system, I say, must be one of the first to undergo important modifications: it ought to be the first to acquire the maximum of activity and power, in order that it might act with increased energy and effect on the solid and substantial aliments on which animals feed, not only in greater abundance, but at an age at which Nature never intended them to be so highly fed.

Physiologically, therefore, it may be argued, we must admit that

both the use of teeth and dentition ought to be earlier in subjects weaned at so early an age and so soon fed with substantial food in abundance, since the quicker wear of the organs is a necessary consequence, hence their earlier replacement by teeth stronger and more resisting is a natural condition of such alimentation.

Physiologically, again, we can understand that when, from whatever cause, the entire orgasm assumes a more active development, the teeth, the same as other organs, ought, considered as parts of this orgasm, to participate in this general precocity, and consequently follow a more rapid course in their succession of evolution.

Nevertheless, these opinions, which the *data* of science permit us to assume *à priori*, have their foundation demonstrated by observation and practice. And such, I hope to prove to you, are the results of facts which I shall now bring forward by way of completing my reply to the question you have done me the honour to address to me.

Of all the known bovine race, the English Durham breed is, undeniably, the most remarkable for precocity of development. Its property of fattening quickly, and reaching full growth at an early age, constitute its character and recommendation. It is equally notorious, and cannot be denied, that this property, which has been conferred on the breed solely by good food and abundance of it, would speedily degenerate, and in the end become lost, if those destined to perpetuate it, or their offspring, were not themselves maintained in the same condition by alimentation as that which produced it in the first instance.

Now, such is precisely the case with the Durham oxen and those most resembling them, on which in dentition, and especially in the evolution of the permanent teeth, may be observed the precocity which has given rise among the agriculturists of your part of the country, the incertitudes and doubts that you require to be cleared up.

I could send you some observations I have made, relative to this subject, on oxen and cows of the Durham breed which I had occasion to visit at the dairy (*vacherie*) of Alfort; but I prefer to communicate to you, as being more complete and therefore better calculated for your conviction, those made in the royal dairies of Pin and Poussery, by MM. the directors of those establishments, and which, from the manner in which they reached me, have all the value of official documents. I annex, literally copied, the questions I addressed to my very honourable colleagues, and the answers each of them kindly favoured me with.

Questions.	Answers of the Director of the Royal Dairy at Pin.	Answers of the Director of the Royal Dairy at Poussery.
1st Question.	Ten animals of the dairy of Pin are in this case, viz.	Ten animals of the dairy at Poussery are actually in this case; viz.
Are there in the dairy (<i>vacherie</i>) over which you preside cows or bulls which have cut the whole of their permanent teeth prior to their fifth year?	1. MORNING STAR, bull, born in England, 26th of Aug. 1842.	1. EARL OF BUCHAN, bull, bearing the registered No. 177.
And how many?	2. SYMMETRY, cow, born in England, 28th Nov. 1841.	2. SUTTONIUS, bull, numbered . . . 178
	3. FAIR MAID, cow, born in England, Nov. 1841.	3. Thalie, cow . . 115
	4. JOSEPHINE, born at Pin, 3d Feb. 1842.	4. Emerald . . 109
	5. Lucy, born at Pin, 9th March, 1842.	5. Adela . . . 99
	6. Magdelene, born at Pin, 14th April, 1842.	6. Strawberry . . 152
	7. Madam, born at Pin, 27th June, 1842.	7. Miss Scott . . 100
	8. Helen, born at Pin, 13th July, 1842.	8. Hebe . . . 105
	9. Hero, born at Pin, 23d July, 1842.	9. Clementine . . 114
	10. Hecube, born at Pin, 20th Aug. 1842.	10. Augustine . . 101

2d Question.

Are there any
which have cut all
prior to the fourth
year?

There are seven; viz.
1. ADONIS, English bull.
2. HUNTRESS, cow, born
at Pin, 27th Oct. 1842.
3. MARIETTE, born at
Pin, 4th Dec. 1842.
4. MARY GOLD, born in
England, Dec. 1842.
5. CERES, born at Pin,
19th Jan. 1843.
6. THISBE, born at Pin,
6th March, 1843.
7. Tigress, born 10th
March, 1843.

The ten animals named
above had all their teeth
prior to their fourth year.

3d Question.

Are there any
which have cut their
teeth earlier?

There are four; viz.
1. FLORA, born at Pin,
12th April, 1843.
2. CLARISSE, born at
Pin, 15th June, 1843.

The bull, Earl of Bu-
chan, mentioned above,
cut all his permanent teeth
before he was three years
old.

Questions.

Answers
of the Director of the Royal
Dairy at Pin.

Answers
of the Director of the Royal
Dairy at Poussery.

3. PIRELINE, born at Pin, 1st July, 1843.

4. Titania, born at Pin, 19th July, 1843.

SUETONIUS, also mentioned above, who will not attain his third year until November next, has likewise cut his corner teeth.

Among the cows, I cannot be certain of more than a single instance, not often had occasion, or rather curiosity, to inspect their teeth. The solitary case is Miss SCOTT, who, at two years and seven months, had six permanent teeth; and two months after, that is, at two years and nine months, put out her corner teeth, to the great surprise of some country amateurs, who could hardly believe their eyes.

4th Question.

At what medium age, according to your personal observations, do Durham oxen, bulls especially, shed the whole of their milk teeth?

The dairy of Pin contains at this moment but three bulls. All the others are much younger, and still retain their sucking teeth.

Among the bulls who have got their teeth, two have had them at little more than four years of age.

The cows are in the habit of casting their last teeth between three years and a half and four years. Those I have mentioned above have been for the most part born at the establishment at Pin, a circumstance which leaves no room for doubt concerning their birth.

Four beasts only present exception to the ordinary rule, and shew a dentition conformable to

On an average, the Durham breed may be regarded as cutting the whole of their permanent teeth between their third and fourth years. Past this age, I cannot call to mind a single instance of the milk teeth being retained; whilst I have frequently seen beasts of this breed, no more than three years of age, in whom dentition had been completed, they having all their permanent teeth.

I have never remarked the same precocity of dentition in this country (NIEVRE). However, it is not a rare thing to see, among our best breeding farms, animals that have been pushed on in time by good feeding, cut at three years the two middle

Questions.	Answers of the Director of the Royal Dairy at Pin.	Answers of the Director of the Royal Dairy at Poussery.
	their age, and agreeing with the generally received <i>data</i> .	teeth, and have a full mouth at four years of age*.
	Several of our breeding cows, born in the course of the year 1841, carry in their teeth signs of being <i>two</i> and even <i>three</i> years beyond their real age.	

So that the results of observations made by two individuals, specially located in situations the most favourable for clearing up the question, are :—

1st. That in general the progress of dentition is more active, and that the permanent teeth especially are cut earlier, in Durham cattle than in our indigenous breeds.

2d. That most of the bulls of the Durham breed get all their permanent teeth at their fourth year at latest; and that it is not a rare thing to see the whole of the permanent teeth at three years old, and even earlier.

3d. That, henceforth, we shall be liable to great errors in pretending to estimate the age of such animals according to the rules ordinarily laid down by authors.

At the same time, as I had the honour of saying at the commencement of this letter, these observations are not the only ones I have collected. The Hon. M. Massé (du Cher) has been so kind as to communicate to me all the observations he has made on this important subject; and it is the interest which I myself feel on it that urges me to make the substance of the same known to you. These go to prove that, as well as breed, abundance of good feed at an early age has the effect, at the same time that it accelerates the general growth of the individual, of equally hastening

* M. Girard, senior, has already informed us, in his *Treatise on Age*, chapter AGE OF THE OX, that the cutting of the permanent incisor teeth may prove earlier or later by some months, according to the constitution of the animal and its growth.

In subjects forced by feeding, and whose growth is rapid, dentition will be early likewise. It advances faster; and the teeth being earlier formed, they are cut earlier.

The contrary happens in weakly, stunted animals, and such as have suffered much illness, or have been over-worked, and in consequence become but imperfectly developed in growth and bodily powers.

the evolution of the dental organs, and so producing the same precocious mouths which we have just seen exhibited by the Durham breed.

M. Massé has at home a bull of the *Charolaise* breed (having, it is true, a fourth of Durham blood) born at the end of April, 1843, which had all its permanent teeth in February 1846; consequently, at the age of two years and ten months.

He has likewise in his pastures another ox, of the same breed, but pure blood, born some days after the former, but brought up in the same manner, that is, by forcing aliment, which has now (the 24th of September) lost its last milk teeth, and, consequently, has got a perfect mouth at three years and a half old.

These two beasts, which are in a state of preparation for the show at Poissy, have both been seen by M. Yvart at Mr. Massé's house.

All the oxen of *Charolais* do not, it is true, manifest the same activity of dentition as the above two; but, since the breed of this country have, from the intelligent care taken of it, acquired a certain precocity in its development, it is worthy of remark that the *Charolais* oxen, reared and pastured in the ordinary manner, generally have all their permanent teeth at four years and some months.

M. Massé is of opinion that generous and substantial feeding at an early age has especial influence in creating early dentition; and what to him appears corroborative of such opinion, is, that oxen destined for labour, who, unlike those intended to be put up to be fatted, are not well fed at this early age, do not exhibit the same precocity.

Another remark made by this skilful breeder, is, that winter feeding in particular hastens the fall of the temporary and the issue of the permanent teeth. Among other facts in support of his opinion, which I believe well founded, he cites the case of two bullocks he sent in 1845 to the show at Poissy, who in four months, from October to February, each of them lost their four posterior temporary teeth, which were immediately replaced by the permanent.

Furthermore, these observations can be corroborated, if there be necessity for it, by the following remarks, for the communication of which I am indebted to one of the best informed breeders and intelligent men with whom I am acquainted—M. Tourret, formerly deputy of Allier.

“In Allier,” writes to me M. Tourret, “it is the custom to wean the calf at an early age. At two or three months old, at six weeks even, it is taken from its mother. Now, in our country it is rare to see an ox at five years old, or even at four and a half, retaining

any of his milk teeth: there are very few that have not full mouths at fifty-two months. But this rule applies only to oxen of the *bourbonnais* breed."

"For, you must know, that our farmers in Allier go in search of the finest produce of the Haute-Vienne and Dordogne, to work their heavy and alluvial lands. Now, the ox coming from these countries, the Limousine ox, who is strong-built and a good worker, is *very late in coming to perfection*. He sucks for five or six months; and not until this age is he put on any food that requires mastication. And so (not, however, that I am bold enough to assert this as the reason) he does not get his permanent teeth for a much later period than the bourdonnais animals; in general, not until the fifth year; and it is by no means so rare to discover milk teeth even at a later period."

I shall conclude, Sir, by informing you that M. Yvart, Inspector General of Veterinary Schools and Royal Sheepfolds, President of the Judges' Board at the Show of Poissy, to whom I communicated your letter and my reply, has assured me, that, in his tour of inspection through different parts of France, as well as at the market and show of fat beasts at Poissy, and in England, he has observed numerous instances in confirmation of what I have mentioned to you, and which he does not hesitate to ascribe to similar circumstances connected with breed and feeding.

My reply may, perhaps, appear rather lengthy; but the importance which you appeared, and with reason, to attach to the inquiry, will I trust plead my excuse. All I desire is, that it may prove satisfactory to that honourable Society by whom, through you, I have been interrogated.

Consent, I pray you,

To accept, &c.

EUG. RENAULT.

THE MEDICAL PROFESSION IN FRANCE.

A BILL is now before the French legislature for the reform of the medical profession in France. The subject excites great interest on the other side of the channel, and as medical reform is one which has lately attracted some attention in England, we give the following remarks upon the subject from *Galignani's Messenger*. The article, we believe, is from the pen of a well-known English physician resident in Paris, and it gives a graphic sketch of the changes to be made in France as respects the medical profession.—(*Morning Chronicle*.)

“The question of medical reform has made rapid progress in France within the last ten years; but it was not until the month of November last, when delegates from all the medical practitioners of the kingdom met in Paris, to the number of about 5000, and formed a congress, that the numerous and crying abuses which existed were clearly demonstrated. The *Congrès Médical* held its sittings in the Hotel-de-Ville; they were continued for fifteen days; and before their adjournment the minister of public instruction himself consented to be present, heard their suggestions, and pledged himself to bring in, at the earliest opportunity, a bill to relieve the grievances of which the medical body had so long and so incessantly complained. Before we mention the leading topics embraced in the bill now under discussion, it may be useful to give a short abstract of the medical regulations at present established. They were enacted by the law of the 19th Ventose, year XI (10th March, 1803). According to that measure, to which additions have been made at various periods by the Council of Public Instruction and by royal ordonnances, the medical body, as now constituted in France, consists of ‘Docteurs en Médecine,’ and ‘Officiers de Santé;’ the former, graduates of one of the three universities, Paris, Montpellier, or Strasburg; and the latter, an inferior grade, merely received by medical juries. A certain number of foreign graduates are also practising in France, by virtue of royal ordonnances. All candidates for the degree of M.D. must have graduated as bachelors of letters and sciences in the Sorbonne of Paris, or the faculties of Strasburg or Montpellier. The period of their studies is four years, during which they are required to undergo five examinations, and to defend a thesis. The first examination has for its object natural history, natural philosophy, and chemistry; the second, anatomy and physiology; the third, the theory of medicine and surgery; the fourth, materia medica and medical jurisprudence; the fifth, the practice of medicine and surgery. Of these examinations, two, the first and the fifth, are essentially practical; each student being required, for the former, to perform a minute dissection in presence of the board of examiners; and for the latter, to examine two patients who are presented to him in the hospitals. The thesis is written in Latin or French; the examinations are public, and of a very stringent character. Doctors of medicine have a right to practise their profession in every part of France. The officers de santé were instituted in 1804, during the wars of the empire, at a period when there was a great dearth of medical men. Candidates for this grade are examined by a commission of three persons, called a *medical jury*, which sits in Paris, and visits the departments twice a-year. The candidate is not required to have taken literary degrees, and only undergoes three oral examinations. The first

on anatomy; the second, on the elements of medicine; and the third, on surgery and the ordinary knowledge of pharmacy (*les connaissances les plus usuelles de la pharmacie*). *Officiers de santé* are authorised to practise only in the department in which they have been examined; they are prohibited from taking the title of doctor; but, through a curious oversight of the law, they may with impunity assume the appellation of “*médecin*,” given in common to doctors, *officiers de santé*, and *vétérinaires*. The new bill contains provisions to remedy this abuse. *Officiers de santé* may not perform important surgical operations, except under the surveillance of a doctor of medicine. The penalties which may be at present enforced against persons practising illegally are, a fine of from 100f. to 1000f. against any individual practising as doctor; and a fine of from 25f. to 500f. against those practising as *officiers de santé*. In case of a second offence, the fine may be doubled, and the offender imprisoned for a period not exceeding six months. Foreigners transgressing the above regulations are subject to the same punishments as Frenchmen. Such is the state of the medical profession under the existing system. In the new bill the leading points of reform (those at least which seem to us of most interest for our readers) relate—1. To the two classes of practitioners, doctors of medicine and officers of health. 2. To the repression of illegal practice. 3. To foreign physicians who desire to practise in France. The government’s plan, which has been fully adopted by the committee of the Chamber of Peers, proposes the suppression of the *officiers de santé*. This clause is called, in Count Beugnot’s report, *la disposition capitale de la nouvelle loi*. The congress, by an immense majority, had already demanded the suppression of this grade, which measure would, it was said, have the effect of increasing the respectability of the medical body in France, and, what is still more important, of affording more security to the lives of the inhabitants. On the second point to which we have adverted above—the illegal practice of medicine—the new law declares that any person practising the healing art without having graduated in one of the French faculties, or without a duly legalized authorization from the French government, shall be liable to imprisonment for a period of not less than six months, and not exceeding two years; for the second offence the minimum imprisonment is two years, and the maximum five years. A proposition which, it is probable, will meet with general disapprobation, and, we think, deservedly so, is one which exposes all medical men who may incur the slightest punishment of the simple correctional police to be deprived of their right to practise. This has been modified by the committee, and the penalty is to be applicable only to those who transgress the following articles of the penal code, to which we refer our readers;

viz. articles 316, 317, 330, 331, 333, 334, 335, 308, 349. On the third point alluded to, namely, the practice of foreign medical men, it is proposed by the new law that no foreign physician can be authorised to practise in France, unless it shall have been previously decided by the Royal Council of Public Instruction, that his diploma or degree is equivalent, as an attestation of length of studies and respectability of the university which conferred it, to that granted by the French faculties. Further, the authorization may be restricted to a certain locality, and confined to a limited period, and is always revocable at pleasure. It remains for us to notice the state of medical instruction in France. The *corps enseignant*, as at present constituted, is composed—1. Of the professors of the faculties of medicine, who lecture on the various branches of medical science; 2. Of *agrégés*, or assistant professors; and 3. Of ‘professeurs particuliers,’ or private medical teachers, who may be assimilated to the class of ‘grinders’ in Great Britain and Ireland, and whose certificates are of no value as qualification for examination. It will thus be perceived that a class of professors of private schools, whose occupation is lucrative in England, and whose students are recognised by almost all the universities in that country as qualified to present themselves for examination, is unknown in France. To return to the legal medical authorities:—the professors, twenty-four in number, are all appointed by *concours*; the minister, however, enjoys the privilege of nominating the first professor to a newly-created chair. Thus, it is in contemplation to establish a professorship of medical literature in the faculty of Paris, and the nomination will rest with M. de Salvandy or his successor. The judges of the *concours* are chosen partly from the professors of the faculty, partly from the Academy of Medicine; and the election is subject to the approval of the King, and, if such is accorded, it is confirmed by royal ordonnance. The *agrégés* and physicians to the hospital are also named by *concours*. The consequence of this mode of election is, that *concours* are incessantly going on. The number of candidates is sometimes very incommensurate with that of the vacancies (last year there were two vacancies for the situation of surgeon to the hospitals of Paris. There were thirty-two candidates, and the *concours* lasted five months). A general impression prevails that some means must be devised to diminish the host of competitors. At present all doctors of medicine have a right to contend for a vacant professorship; but the new law proposes to exclude all but *agrégés* from this privilege. The professor’s salary is 10,000*f.*, whilst that of the *agrégé* is only 2000*f.* In several provincial towns, such as Rouen, Caen, Bordeaux, &c., secondary schools are established, each of which possesses its staff of professors, whose

certificates are recognised by the faculties. The organisation of these provincial schools is mainly owing to the exertions and influence of M. Orfila, the distinguished Dean of the Parisian School of Medicine; and one great advantage attached to them is, that by keeping the students of the respective localities at home, they prevent their agglomeration at Paris, where their naturally peaceful and scientific pursuits are too frequently interrupted by the excitement of political struggles or the allurements of dissipation. One of the greatest and most glorious innovations in medical science of the present century is the study of pathological medicine; and we must acknowledge that to the efforts of French pathologists the world is mainly indebted for the perfection of this branch of the profession. The celebrated Dupuytren bequeathed a sum of £8000 for the creation of a chair of morbid anatomy. But much yet remains to be done, and the new law provides for the formation of laboratories in the faculties and secondary schools, where the student will be forced, by frequent post-mortem examinations, to acquire a knowledge of the organic lesions accompanying the various diseases to which the animal system is liable. The foundation of bourses, or gratuitous exhibitions, to be enjoyed by laureats of the universities and secondary schools, is in contemplation, and must meet with universal approbation. This establishment, in the form of prize scholarships, &c., has long existed in England. In the latter country, also, the poor receive efficient and skilful medical aid from the dispensary physicians; in France a similar class is proposed to be established under the denomination of *Médecins Cantonnaux*, who must have graduated as doctors of medicine, and, in consideration of a fixed salary, will be required to afford gratuitous attendance to the poor. This class of practitioners will advantageously replace the half-educated tribe of *officiers-de-santé*. A question which has given rise to much discussion, and to great diversity of opinion, relates to the creation of medical councils, analogous in their attributes and action to the council of discipline, which regulate the proceedings of the French bar. But it is generally supposed that the *Conseils Médicaux* will devote their exertions almost exclusively to the compilation of statistical documents and to public *hygiène*. They will, therefore, be very similar to the English councils for the improvement and salubrity of towns.

We have now, we believe, not omitted any of the leading points which require mention relative to the practice and instruction of medicine in France, either in the present state of the law, or in the prospective enactments. Our object has simply been to enable the general reader to form a correct idea of the intention and bearing of the bill, on which the discussion commenced yesterday."

Extracts from Domestic Journals.

INJURIOUS EFFECTS OF INHALATION OF ETHER.

[From "The Brighton Guardian" of June 2d, 1847.]

Sir,—THROUGH the medium of the daily press, the public have been made acquainted with the powerful efficacy of the vapour of ether in annihilating suffering during surgical operations. The question of the possibility of any ill effects to the general health arising from so subtle an agent has not been mooted ; and, with the startling exception of an occasional coroner's inquest on the bodies of those who have died after operations performed during the state of insensibility consequent upon the use of ether, the public have neither read nor heard of any other than the most triumphant success of this new remedy. They have been taught to expect from its administration perfect immunity from pain and suffering of all kind, without fear of after-consequences.

On this latter point, through the medium of the same channel—the columns of the daily press—I would disabuse the public mind.

We are told that in the majority of cases, after inhaling the vapour for three or four minutes, a state of absolute unconsciousness, a corpse-like condition, is induced, during which the most severe and painful operations may be performed without the patient evincing the slightest evidence of sensation,—that the patient wakes, as it were, from a "pleasant dream," and feels no inconvenience whatever from the inhalation. * This is, I fear, the bright side of the picture ; it is, at least, a proposition from which I dissent.

Let us inquire what is the condition of the pulse, of the respiration and countenance during the state of insensibility, and on what these conditions depend.

The circulation at first becomes rapid, then slow and feeble ; the respiration, bearing a due relation to the frequency of the pulse, becomes laboured and stertorous, the countenance is livid, the lips and tongue are blue, the pupils are dilated, the muscles universally relaxed, the functions of the brain and nervous system are suspended, sensation is annihilated, and the patient, to all intents and purposes, for the time being, is a senseless corpse.

It has been said by M. Roux and others, that this state bears a close analogy to drunkenness ; by Baron Flourens, that it resembles asphyxia ; and by others it has been likened to apoplexy of

the congestive form. These are fallacies which I am prepared to dispute. Etherization, as it has been termed, has nothing in common with drunkenness, with asphyxia, with apoplexy, save the state of insensibility; but it has something far more alarming and dangerous than any or all of these conditions taken severally or collectively.

As a general principle, it is acknowledged that no agent, be it what it may, which produces a sudden and violent effect can be safely employed. In the particular cases before us, we have to contend not only with sudden and overwhelming effects, but, what is far more important, with a chemical and vital alteration in the constitution of the blood itself, of which the state of insensibility is but the natural consequence.

The change which the blood undergoes in respiration is almost entirely confined to the blood corpuscles. These, which represent in their independent act of metamorphosis the real vitality of the blood, and from which its fibrin is formed, indispensably require for their healthy change a due supply of oxygen. If this supply be lessened, or altogether cut off, their metamorphosis is imperfectly effected, or entirely suspended, and the amount and plasticity of the fibrin are proportionably diminished or altogether arrested.

The blood, robbed by the ether of its oxygen, impoverished by the solution by the same agent of myriads of corpuscles, of those especially with which it comes into immediate contact, depreciated as a consequence in the quantity and deteriorated in the quality of its fibrin, intensely blackened by the solution of its corpuscles and their contained hæmatoglobulin, is chemically deprived to a considerable extent of its powers of coagulation, and rendered unfit for the purposes of life. A black vitiated blood circulates through the system, analogous in many particulars to that in putrid and malignant fevers.

This impaired condition of the blood is not even partially corrected until respiration of atmospheric air has been permitted for some considerable time, and until lymph corpuscles have found their way into the circulation to replace those of the blood destroyed by the ether. Many persons, especially those who are out of health or enfeebled by long previous disease, are hours, days, nay weeks, recovering from the state induced by the inhalation; many die from its direct effects,—from the want of oxygenised and vitalized blood to stimulate healthfully the brain and nervous system.

With a view to counteract some of the ill consequences of etherization, it has been proposed that the patient should inhale oxygen gas, “as an *antidote*.” This, of necessity, presupposes

the exhibition of a *poison*. So that a patient about to undergo operation is to inhale a poison, be subjected to its deleterious effects, and then to swallow an antidote; as though the operation were not of itself sufficient, without all this extra complication of poison and antidotes, suspended animation, or actual death, proximate or remote.

But what are the facts? Etherized blood cannot be reddened by oxygen gas, simply because its black red colour is not dependent alone on a chemical change in the hæmatin. The ether has also dissolved the blood corpuscles, and thus permitted the escape of the contained hæmatoglobulin; and these it cannot restore. Had the blood been merely rendered artificially venous by the absorption of its oxygen, or by cutting off its ordinary supply, its arterial colour would be restored by agitating it with oxygen. In the following experiment these facts are pretty clearly established:—

In each of two vessels I caught eight and a half ounces, by weight, of arterial blood; both vessels were instantly plunged in water at a temperature of 98° Fahrenheit: the blood in one vessel was exposed for three minutes to the influence of the vapour of ether. The blood became of an intensely black red colour, whilst coagulation was to a very considerable extent interrupted. Subsequently oxygen gas was diffused through the etherized blood, but no restoration of colour could be produced. Placed in the field of a powerful microscope, numerous flocculi, the remains of the capsules of the corpuscles, were observed floating in the fluid portion of the blood, which was rich with these remains. At the expiration of seventy-two hours, the blood in both vessels was weighed: that which had been subjected to the vapour of ether yielded *five and a half* ounces of black red *fluid*, and three ounces of a stringy *clot*, conclusive evidence of the small amount of fibrin. The fluid portion of the blood (serum) in the other vessel, in which neither flocculi nor corpuscles could be detected under the microscope, weighed *half* an ounce, the *clot eight ounces*.

This indisposition of the blood to coagulate after the inhalation of ether offers another very serious consideration. Fatal hæmorrhages must occur, and do occur; and as the whole circulating fluid is deteriorated by the ether, is it matter of surprise that the lips of wounds evert, that the discharge is unhealthy, that stumps become flabby or gangrenous, and that patients sink and die?

Etherization, it is to be feared, exerts also a baneful influence directly upon the respiratory organs. A medical friend in Dublin informed me recently, that, of thirty fatal cases following operations in which ether had been employed in the various hospitals of that city, eight were found to be the subjects of recent tubercles of the lungs, the undoubted product, it was believed, of inhalation.

The endeavour to alleviate human suffering under one of the most trying of all situations, the knife of the surgeon, is highly praiseworthy, and the public must feel deeply indebted to those medical gentlemen who have devoted their time and talents in the attempt to achieve so desirable an end. It becomes us, however, to ascertain, as far as we are able, whether the means employed are compatible with the health and lives of those about to undergo operations.

Pain during operations is, in the majority of cases, even desirable; its prevention or annihilation is, for the most part, hazardous to the patient. In the lying-in chamber nothing is more true than this: pain is the mother's safety, its absence her destruction. Yet are there those bold enough to administer the vapour of ether even at this critical juncture, forgetting it has been ordered that "in sorrow shall she bring forth."

I have the honour to be, Sir,

Your obedient, humble servant,

JAMES H. PICKFORD, M.D.

1, Cavendish-place, Brighton,
29th May, 1847.

* * * Our thanks for this.

DR. SEARLE ON THE USE AND OPERATION OF CALOMEL.

[From "The Medical Times."]

"WHATEVER be the preparation of mercury administered, the condition in which it is received into the system from the stomach I believe to be that of a *chloride*, seeing that it must be first subjected to the influence of the hydrochloric acid of the stomach's secretion, and dissolved, before it can be received into the circulation. Hence it is, in my opinion, that calomel (the chloride of mercury) is so much more certain and determinate in its effects, and therefore so superior as a remedy to all and every other preparation of mercury we possess."

What follows is an extract from Dr. Searle's work on "The Philosophy of Life, Health, and Disease."

"The operation of all remedies received into the stomach I believe to be in admixture with the blood, after their absorption from the stomach; experiments recently made having established this in my mind beyond question. The stomach, nevertheless, is

subject, doubtless, as much so as the skin, to irritation and other local agencies operating upon its surface; and thus, through its nervous sensibilities, also, may it be affected as well as other organs connected with it; but neither calomel, rhubarb, jalap, wine, nor many of the numerous things administered as remedies do so affect it—not even ipecacuanha; an infusion of which injected into a vein in the leg operates as an emetic in a quarter of the time required by any quantity administered by the stomach. These, then, when taken, are accordingly first absorbed into the blood, and each, during its circulation, severally operates in its own particular way—jalap as a purgative, ipecacuanha as an emetic—either directly upon the organ influenced, or indirectly so, by first influencing the brain and nervous connections of the part. In proof of this, the same remedies applied to a blistered surface, from which they become severally absorbed, in like manner operate as when taken into the stomach.

Mercurials increase capillary excitement.—Calomel, when absorbed by the veins from the stomach and bowels, in its passage with the blood through the liver, to which it is immediately conveyed, excites this organ to increased secretive function; hence the bilious evacuation which so constantly succeeds to the use of a grain or more. Proceeding from the liver, and admitted into the general current of the circulation, its operation I believe to be specific on the capillary system at large, exciting these vessels to increased action. Hence its general influence as a stimulant to the whole system, its renowned deobstruent power, and its operation on the glandular system, increasing all the secretions. Its operation in exciting the capillary arteries, and thereby secretion, necessarily removes obstruction from the exhalent vessels, and congestion from their venous terminations—the cause of exudation; and thus is exudation prevented, and absorption at the same time increased; and hence the accredited action of mercury upon the absorbents, in removing exudation of whatever kind, and the various dropsical affections. Its operation on the capillary system being general, the action of the heart, and that of the brain, through the medium of their organic structure, is excited also; in short, all the functions. It thus operates probably by imparting qualities to the blood by which its constituent particles may have a greater affinity for oxygen—the vitalizing principle; and thus may increased chemical action in the blood, and its consequence, excitement, take place throughout the system. But, whether this be the mode of its operation or not, the effect is, as I have described it, excitement to the general system.

Indications which mercury fulfils.—The power of mercury in increasing capillary action is further evinced by the febrile com-

motion it excites in the system, and the buffed blood of those under its more abundant influence—effects succeeding to its exhibition which should be guardedly watched (generally occurring when it has ceased to operate as an evacuant), and when they arise its further use should, in a general way, be prohibited, though in some cases it may be employed with advantage on the principle (noticed when treating of blood-letting) of exalting the general excitement of the system, in relief of a local or partial affection: thus shewing its use in inflammations of the bowels, and numerous other organic inflammations. But, speaking of its employment in a general way, it may be observed, that the indications for its use in inflammatory affections are limited to the atonic stage, and that of oppression. In no case should it be given in the intermediate or more active stage of inflammation, involving the heart's excitement, save in very guarded doses, and in conjunction with other evacuants. But when the more active condition of inflammation or of fever has been moderated by bleeding and other evacuants, or when debility has succeeded to previous excess of excitement, the atonic condition of these affections of the capillary system, its administration supports a due action of the capillaries, excites the secretions, and invigorates the heart's action, in common with the rest of the functions, and accordingly becomes our chief remedy; and in combination with opium, to moderate its excitement and allay irritation, carried to the extent of inducing increased salivary secretion, which appears to mark its ultimate effect for good, is of all remedies the most valuable."

MR. CHERRY IN REPLY TO MR. OLDEN ON ETHERIZATION.

To the Editor of "The Veterinarian."

Horatio. ——— But this is wondrous strange!

Hamlet. And, therefore, as a stranger give it welcome.
There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy.

HAMLET, Act 1, Scene 5.

Sir,—WITH great pleasure I have perused Mr. Olden's paper on the effects of ether; but as that gentleman has quoted some passages from a joint report of Mr. Henderson's and my own, I submit that were the quotations taken rather *longer*, they would shew a very different meaning to that which they are now made

to convey. So far in simple comment: but there is something which looks very much like careless reading in the latter half of the second paragraph in Mr. Olden's letter. I must beg of that gentleman to re-peruse the two communications from Mr. Henderson and myself.

Our remarks upon the "*mind not being affected*" seem to be viewed with astonishment, as if it was entirely out of all reason; but so far from it, it is a correct division of the powers of the brain into the pure and innate or living action, and the controlling power over that action; or, in other words, the difference between *INSANITY* and *sanity*, or *half-drunk* and *dead-drunk*. This condition of brain and its powers must never be lost sight of, as upon this depends the varied degrees of action, not only of ether, but also of many other medicinal agents.

Mr. Olden has confounded these two powers or functions with each other; for though we in colloquial language use *lost* or *out* of the *mind* for being in a state of insanity, yet it is a modern figure of speech, the old really expressive and strictly true phrase was "*out of his wits*;" for were the *mind to be really gone*, death must ensue; but where the influence of a depressing agent is carried too far, or exists for too long a time, then there will be such a prostration of the innate or structural power itself as to put on the *appearance of the loss of "mind."* Carry this but ever so little too far, and death will inevitably ensue.

I have long meditated some observations in connexion with the physiological developments of the brain and its subsidiary systems—a subject which has been left in undeserved oblivion—and shall embrace the first opportunity to lay them before the public.

With regard to the apparatus used and invented by Mr. Olden, I have no fault to find, so far as it goes; but in the earlier experiments we used an instrument *de-facto* its counterpart, and almost a "*vrai-semblance*," and in the last experiment we employed an instrument very much more perfect in its construction, both for the introduction and expulsion of common air, an instrument constructed by the late ingenious and talented Mr. Read; and so perfect was its action, that *twelve* ounces of ether were converted into vapour and passed off with the current of air, with the exception of a small corner of the lowest piece of sponge, in which about a drachm of ether might remain: the other parts were to the hand completely *dry*. The principal fault in the instrument—and which is recorded—was from the small size of the receiver not allowing a sufficient quantity of ether to be introduced at one time: this was so slight a defect, that had the inventor had health it would have been remedied with ease. In six experiments

four different descriptions of instruments were used, and the avowed object was to ascertain the effect of *inhaling the PURE VAPOUR of ether*. A result that had never before been arrived at, and a case more replete with physiological facts of the first importance, as shewn in Experiment 4, and one which must receive its due consideration and retrospection, has never fallen to my lot previously to observe. The rupture of the aorta is so peculiarly expressive of the true action and manner in which the ether vapour acts upon the system, that I cannot for an instant conceive how its indication can be overlooked. It is a subject too important to enter on in a mixed paper, and I must therefore defer its consideration till I can prepare an article expressly on it.

Further, neither Mr. Henderson nor myself have hitherto made any comments on the results of our experiments. It was not intended that the "remarks" at the end of the second communication should be more than a *summary*. We set out with the intention of noting every thing that occurred, suppressing nothing, contorting nothing; we had no previous dogmas to support; we heard many conflicting opinions, but before any really correct view could be arrived at, it was requisite to know *what was the real action and power of the agent employed*. Verbal inquiry into these points elicited nothing; *opinions*, it is true, we obtained in abundance, but of *facts* not one; hence the origin of those experiments, at that time unique in every sense, and, as far as we know, they still exist without rivals.

It was no "*accident*" in the exclusion of atmospheric air: it was pre-determined, the course to be pursued.

So rigidly was a course of *non-comment* adhered to, that even between ourselves it was not allowed: the symptoms and results were alone carefully compared—*TRUTH was our object, and that we obtained*.

That the horse in Experiment 4 died from suffocation, as that word is ordinarily used, I admit has some plausibility; but, pathologically speaking, it was not the cause of death. On this point more anon.

We were aware that sensation was so far gone before an animal falls as to render it insensible to pain; but our reasons, as given in the latter part of the second communication, were founded on well-digested reasoning as to probabilities. We have never condemned the exhibition of the ether; we only expressed our fears of its proving less useful than was hoped for. The opinions then jointly given, I now repeat and confess, sway my mind more strongly upon longer reflection and observation. Mr. Olden's case—for he states but one—only proves the more the opinions we

have before given, viz. the great uncertainty of ether as a depressing agent. All our best veterinary practitioners fully agree with Mr. Henderson's views and my own. The surgical profession are ceasing to employ it, finding that the ratio of deaths is increased by its exhibition, and such must inevitably be its results in our practice. Nevertheless, I am glad to see that the observations are pursued, and shall be delighted to hear with success; but I fear it will prove only a hope.

With every kindly feeling towards Mr. Olden, and wishing him all possible success, only trusting to his candour to inform us when—if ever—he ceases to place confidence in his agent, I beg leave to subscribe myself,

Your obedient servant,
ARTHUR CHERRY.

June 17, 1847.

P.S. I may state that no description or drawings of the different kinds of apparatus employed were given, because it was the wish of the inventor that it should not be done; and further, we felt that the making public imperfect instruments would be unfair towards inventors and injurious to the public. Mr. Read's apparatus, with the proper modifications, and not in any way interfering with the principle on which it was constructed, is by very far the best; more compact, more efficient, requiring less ether, and less liable to be out of order.

[The lateness of its arrival, prevented our assigning to this communication an earlier place in the present number.—*Print.*]

REVIEW.

Quid sit pulchrum, quid turpe, quid utile, quid non.—Hon.

A REGISTER OF EXPERIMENTS, ANATOMICAL, PHYSIOLOGICAL, AND PATHOLOGICAL, disclosing a new and striking fact, demonstrative of a (probable) Universal Principle pervading the Human Organization and all Animal Life, not hitherto expounded by Comparative Anatomists and Teachers of Human Physiology. By JAMES TURNER, V.S., Regent Street, London. Part III, pp. 21. Longman, 1847.

· WITH singular periodic precision has Mr. Turner proclaimed his third appearance “in the same character:” like one of the planets, he has completed his revolution punctually to his time. It was,

if our journal does not mislead us, in May 1839, that his PART I came out; in May 1843, that Part II issued; and now, in May 1847, appears Part III: thus making intervals of exactly four years between the publication of each part. Some people might feel disposed to find fault with this tardy progression; for our own part, however, knowing, as we do, to what calls of business Mr. Turner's time is continually subjected, and that experiments such as he is engaged in can only be put in practice as opportunity offers and leisure serves, we can well make excuse for him, if any be needed; and moreover, we would rather commend than criticise any reasonable tardiness, because more ample time is thereby given for that sober and serious reflection which researches of the grave nature he has undertaken imperatively demand.

Those who may not possess the former parts of Mr. Turner's work, will find accounts given of them in vols. xii and xvi of THE VETERINARIAN. For fear, however, of neither source of information being at hand, and in order that we may carry our reader on the present occasion along with us, we deem it most prudent, *in limine*, to recapitulate a little out of former accounts.

From blood flowing out of a living animal it is on all hands acknowledged that a *halitus* or vapour is seen ascending; but no physiologist, either before Mr. Turner's time or since, has advanced so far as to assert that a "blood steam," or *gas*, actually circulates through the arteries along with the stream of liquid blood. And what first suggested this notion to Mr. Turner's mind, a notion which future and varied experience, so far from dissipating, has but tended more and more to brighten into verisimilarity—we repeat, what first created this "notion," was this:—"Hitherto," says Mr. Turner, in Part II, "when physiologists have imprisoned the blood of a living animal in any large trunk—the carotid, for instance—for the space of two inches, between two ligatures, and have allowed three or four hours to elapse, they have invariably found the blood *coagulated*, and of a dark colour, upon slitting open the vessel. But when I undertake a sudden seizure of such a portion of artery of a living animal *with the NEW INSTRUMENT*, and cause an *instantaneous imprisonment* of its contents, *in transitu*, a result totally different is obtained*."

"Harvey gave circulation to the blood; Hunter, life to it. Turner would give *gas* to it:" so says our review of Part II†: "the actual (or assumed) fact being," in Mr. Turner's own words, "that there is a *joint gaseous and sanguineous circulation*."

With thus much premised, we shall come at once to the under-

* See Part II of Mr. Turner's "Register of Experiments."

† See VETERINARIAN, vol. xvi, p. 355.

standing of the "address to the general reader," with which Mr. Turner has prefaced Part III. It is this:—"The important fact alluded to in the title-page of this the third part of my labours, is the discovery of a free channel of communication for the transmission of ordinary atmospheric air directly into the cavities of the heart, as received by the nostrils and windpipe, and transmitted through the lungs, wholly independent of the vascular pulmonary circulation."

Mr. Turner, feeling convinced that there exists in the arterial system a *gaseous* as well as a liquid current, became, of course, most anxious to discover by what means, or through what channel, air obtained admission into the bloodvessels; and it was the following experiment, so curious in its results, confirmed by others of a similar nature, which led him to make the bold assertion, that there exists a "free channel of communication for the transmission of ordinary atmospheric air," from the lungs, "directly into the cavities of the heart,"—"wholly independent of the vascular pulmonary circulation."

Through an incision made into the windpipe of a vigorous young horse were poured, at twice, a pound of crude mercury. For a quarter of an hour the animal continued shewing signs of pain and irritation; but then became so "calm," that the opinion was "he would have survived the shock." However, "he was immediately shot." "I do not hesitate," continues Mr. T., "to avow, that this experiment was instituted expressly with the expectation, ay, even with the hope, that I should find *running mercury within the left ventricle of the heart*." Four ounces of uncoagulated blood, "rather inspissated and grumous," were found in the left ventricle, upon the surface of which, after exposure to the air for a very few minutes, "a slight film was quite evident to the naked eye, of a dirty white colour, and *apparently metallic*." The blood, only an ounce, in the left auricle, "presented the same metallic film on its surface." And both "the blood from the auricle and ventricle has since been analyzed by an eminent chemist, and pronounced to be *strongly impregnated with crude mercury*."

Reasoning on so curious—though it appears not to him, unexpected—a result, our author continues:—"It must, I imagine, be conceded, that structures which could be permeated by particles of a metallic body would be more readily penetrated by unmixed or pure atmospheric air. That the ordinary air of the atmosphere did accompany those particles of the quicksilver throughout the bronchial tubes to the utmost limits of their ramifications in the horse experimented upon, I take it must also be admitted: then, it is obvious that one of the most important functions of the left

heart must be that of a gasometer pump to the entire organised system: it may also have other functions to perform equally important."

It would hardly be fair dealing to extract more largely than we have done from a pamphlet consisting of no more than one-and-twenty pages. We have set Mr. Turner's "discovery" forth, and pretty well in his own language; we have also shewn how he has been led on to make it, and what deductions he has drawn from it; and, having done this, we are content to leave the matter to the judgment and decision of wiser heads than our own. Thus much, however, we must say—that, whether it turn out to be the disclosure of "a great fact," or no fact at all, we, for our own part, hold ourselves Mr. Turner's debtors for the persevering and undaunted manner in which he has prosecuted his bold essays to extend the limits of medical science: nor can we, nor will we, conclude this notice of his work without promulgating it as our opinion, that his "experiments," hitherto, have not received the attention they justly deserved at the hands of persons at least equally with, if not more than ourselves, interested in the extension of science in so important a direction.

REARING CATTLE, WITH A VIEW TO EARLY MATURITY.

THE cows should be good milkers, able to keep at the rate of two-and-a-half to three calves each. It is, in general, highly expedient for the beef grower to attempt breeding his own bull. It is evidently much for the advantage of the breeder to spare no reasonable expense in obtaining a bull of thorough purity, and then to select his calves with the most scrupulous attention. It is very desirable to have all the cows to calve betwixt the 1st of February and the 1st of April. If earlier, they will get almost dry before the grass comes, and calves later than this will scarcely be fit for sale with the rest of the lot. When a calf is dropped, it is immediately removed from its dam, rubbed dry with a coarse cloth or wisp of straw, and then placed in a crib in the calf house among dry straw, when it receives a portion of its own mother's first milk; which, being of a purgative quality, is just what is needed by the young animal. For a fortnight, new milk is the only food suitable for it, and of this it should receive a liberal allowance thrice a day; but means should now be used to train it to eat linseed cake and cut Swedish turnips; and the readiest way of doing so is to put a bit of cake into its mouth immediately after getting

its milk, as it will then suck greedily at any thing it can get hold of. By repeating this a few times, and placing a few pieces in its trough, it will usually take to this food freely, and, whenever this is the case, it should have as much as it can eat, that its allowance of milk may be diminished, to meet the necessities of the younger calves that are coming in succession. It is always most advisable to avoid mixing any thing with their milk by way of helping the quantity. When a substitute must be resorted to, oatmeal porridge mixed with the new milk is perhaps the best. An egg stirred into each calf's allowance is a good help; but with this exception, it is best to give the milk warm and unadulterated, and along with this, dry farinaceous food, turnips, and hay. If more liquid is needed, a pail with water may be put within their reach: some breeders are of opinion that this should never be omitted, it being a preventive of the scours. The diet of the cows at this season is a matter of some consequence. Swedish turnips yield the richest milk; but it is too scanty, and calves fed on it are liable to inflammatory attacks. Globe turnips should, therefore, form their principal food during the spring months. Care must also be taken that they do not get too low in condition in the autumn and winter, and for this end it is well to put them dry at least three months before calving. The cows, when dry, are kept at less expense, and, by this period of rest, their constitution is invigorated, greater justice done to the calf, and so much more milk obtained after calving, when it is really valuable. When the calves are from four to six weeks old, they are removed from their separate cribs to a house where several can be accommodated together, and have room to frisk about. So soon as the feeding yards are cleared of the fat cattle, the calves are put into the most sheltered one, where they have still more room, and are gradually prepared for being turned to grass, and, when this is done, they are still brought in at night for some time. At six weeks old, the mid-day allowance of milk is discontinued, and at about fourteen weeks they are weaned altogether. When this is done, their allowance of linseed cake is increased; and, as they have been trained to its use, they readily eat enough to improve in condition at this crisis, instead of having their growth checked, and acquiring the large belly and unsightly appearance which used to be considered an unavoidable consequence of weaning. The cake is continued until they have so evidently taken with the grass as to be able to dispense with it. They are not allowed to be out very late in autumn, but as the nights begin to lengthen and get chilly, are brought in during the night, and receive a foddering. When put on turnips, the daily allowance of cake (say 1 lb. each) is resumed, and continued steadily through the winter and spring, until they are again

turned to grass. This not merely promotes their growth and feeding, but seems a specific against quarter-evil or black-leg. When put to grass as year-olds, they decidedly thrive better on sown grass of the first year than on old pasture, differing, in this respect, from cattle whose growth is matured. They are laid on turnips again as early in the autumn as these are ready; and it is a good practice to sow a few acres of globes for this express purpose. It does well to give the turnips upon the grass for ten days before putting them finally into the feeding yards; and then if they can be kept dry and warm, and receive daily as many good turnips as they can eat (globe till Christmas and Swedish afterwards), they will grow at a rate which will afford their owner daily pleasure in watching their progress, and reach a weight by the 1st of May, which, if markets are favourable, will reward him well for all his "trouble and pains."—The contributor of the foregoing extract begs to direct the attention of his brother farmers to the liberal course of management so satisfactorily recommended. There can be no doubt but that ample and good feeding, keeping "dry and warm," with careful attention to all points of good management, will well repay any "trouble or pains" taken. The crops grown from the dung of well-fed cattle will reimburse any additional outlay incurred, to say nothing for the greatly increased value of the cattle so treated. Contrast the treatment recommended with the starving straw-yard system, too often followed under the absurd notion of rearing cattle at little cost, and turn to your crops and your cattle for an answer.

STALL-FEEDING.

Rye-Grass.—Mr. Dickinson's Method.

[From the "Farmer's Herald."]

WE have upon more than one occasion called the attention of our readers to the many important advantages gained by shed or stall-feeding in summer.

We will here recapitulate a few of those advantages:—1st. An abundant supply of manure both solid and liquid. 2d. A positive economy arising from the much larger amount of stock a given area will maintain by this means, as compared with the old system of pasturage. 3d. The having your beasts continually under the eye of yourself, or those to whom you depute the care of them. 4th. Less damage to fences, and consequently less cost in the repair of

them. 5th. A quicker return upon your capital in consequence of the less time an animal will require to fatten when the food is brought to it, compared with the time necessary for that purpose where it has to gather its food in the fields.

Now, almost any one of these advantages—and they might be still further multiplied—would be sufficient, one would think, to induce every farmer to try the experiment upon a small scale, and it is upon a small scale only that we would recommend experiments in agriculture to be tried; but the experiments should be repeated for at least *four* years, and not less than three failures ought to occur before any agricultural experiment be deemed not to have succeeded.

If our readers be induced to try the experiment of stall-feeding on a small scale and in the ordinary and long accustomed method, we do not hesitate to say that they will soon become stall-feeders upon a large scale, and with all the improvements with which modern skill has invested the subject.

We have no fear that, where ten beasts are subjected to the system this year, next year twenty beasts will be tied up, and the food will be rye-grass, grown—*forced* would be a better word—upon the system of Mr. Dickinson, of Curzon-street, May-fair. We well remember the excitement this gentleman created at the meeting of the Yorkshire Agricultural Society at Beverley, in 1845, when he stated that he had grown eight or ten crops of rye-grass on the same land in one season, and when he produced, as a sample of his fourth cutting of that year, a bundle of grass then measuring from three to four feet in length. We well remember this, and we remember also the incredulity with which his statements were received. There was, however, upon the face of Mr. D.'s statement so much candour, and the evidence of the bundle of grass was so palpable, that, astounding as his statements were, there was nothing left for those who gave any consideration to the subject but to believe that which he had asserted, and to give him the credit, certainly his due, of having turned over a new leaf in the history of agriculture, and of having discovered a method of cultivating rye-grass infinitely superior to any thing heretofore known.

We have recently had the opportunity of inspecting Mr. Dickinson's *modus operandi*; we have seen and satisfied ourselves that at this moment (May 22) his second crop of grass is ready for the scythe, even before the first is consumed;—we have seen of how much value to him 24 hours are in the growth of his crop—and we have learnt how by a succession of experiments, minute and inexpensive it is true, but not therefore the less important, he has arrived at the conclusion he has, and to which he is fast bringing the many, very many practical agriculturists of all grades, who

flock to him, like ourselves, to see with their own eyes, and be convinced of the truth of what they have read. Mr. Dickinson's kind and polite attention to all who come to him in the name of Agricultural Science knows no bounds: how he contrives to spare time, from his extensive business engagements in London, to shew and to explain with a patience becoming a paid lecturer, *all* he has done, and all he hopes to accomplish, is to us little short of a marvel.

THE VETERINARIAN, JULY 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

ALTHOUGH it be argued, as we understand it has been, and by high authority, too, in the profession, that our Charter confers no power upon the Council to prescribe the form and measure of veterinary education, no doubt will or can be raised concerning the power given that body by the Charter of organising their own examining board, and setting any limits they choose, and demanding what profundity of knowledge they may deem proper, in the examinations. On this point, at least, the language of the Charter is positive enough—And the Council shall and may make any orders, rules, and by-laws, for fixing and determining “the times and places and manner of examining students who shall have been educated at the Royal Veterinary College of London, or the Veterinary College of Edinburgh, or such other Veterinary College as hereinbefore mentioned, and who may be desirous to become members of the said body politic and corporate; and *for regulating the nature and extent of such examinations*, and for the appointment of persons to examine and determine upon the fitness and qualifications of such students, and for the admission or rejection of such students as members of the said body politic and corporate,” &c. If, therefore, it be in the power of either the London or Edinburgh or any other “recognised” school or “college” to send candidates before the board of examiners, as constituted and instructed by the Council, for examination, *without* such certificates

as the Council in their by-laws have deemed it wise and prudent to prescribe, the latter have it in their power to raise the standard of qualification, through examination, to that pitch, and to stretch it to that extent, as shall render it *most desirable*, on the part of the students at least, that they—even though advised to the contrary by their teachers—come prepared with such testimonials as the Council shall require. And if the Council choose to take certain written papers as vouchers for the possession of certain kinds of knowledge which it is not convenient for their examining-board to enter into the inquiry of, surely it is much easier for the student to bring such vouchers with him than to subject himself to what might be instituted in lieu of them, viz., a *practical* examination. If the Council, in their by-laws, say to the veterinary student, “You must keep *four* sessions at College,” they say so because, as practical men themselves, they know full well that in less time the student cannot acquire the requisite amount of knowledge to enter into the practice of his profession. Were there no such by-law in existence, or, what amounts to the same thing, were no respect paid to it, students might, and no doubt would, present themselves as candidates for admission who possessed nothing beyond a parrot instruction in question and answer, and who, were the examinations to remain such as they at present are—simply *oral*—no doubt would “pass,” and with *éclat*. Such a system as this, however, could not hold together long; nor would it answer either the Colleges or their pupils to make the experiment. Certificateless candidates would have to be put to *practical* tests: that which they might, *upon paper*, have obtained credit for knowing, will now have to be *manually* tested; and thus, though the examiners may be put to the cost of a little additional time and trouble, the candidate will not, most assuredly, in the way he was led to expect, be a gainer by it.

For our own part, we have always been strenuous advocates for *practical examinations*. Either before or after he had, in the presence of the court of examiners, answered the several questions put to him, we would have the candidate taken to the dissecting-room, to the infirmary stable, to the forge; and in each department tested as to his *real* or available knowledge. Then, neither indenture nor certificate might be cared for; then, indeed, would the master be careful to make his pupil “qualified to practise” before

he permitted him to shew his face before the board of examiners. As matters stand, however, certificates are received *in lieu* of such tests, and thus oral is suffered to compensate for the lack of manipular examination.

Mr. Haycock's case of *Melanosis*—as well on account of its rarity, as for the clear, graphic, intelligent style in which it is drawn up—will be read with more than ordinary interest. Such a case, occurring to a young veterinary surgeon at the commencement of his professional career, might place him in an awkward dilemma—might, supposing he mistook its nature, seriously affect his growing reputation; though, on the other hand, supposing him well read enough in veterinary medicine to have his mind led to a suspicion of something of the kind at the time he was examining the tumour, as yet hard and undeveloped, a case of the sort might do him in his practice incalculable service, by shewing how superior his professional judgment was to that of others around him. Let him, then, should he ever be called to a case of the sort, as Mr. Haycock so judiciously did, carefully examine the tumour in every part, and in all its relations to other parts; let him then consider the *colour* of the horse, and ascertain, if he can, whether the (grey) colour has ever *changed from dark to light*; also, take into account the *age* of the horse, &c. For the present, by way of preparing himself against such an emergency, let him, now he has the opportunity, peruse with all his attention Mr. Haycock's admirable narrative, and, we will take upon ourselves to say, he will not very unpardonably err in his diagnosis. At another time we may look into the Foreign accounts of melanosis.

Dr. Perogof has demonstrated that, as "there are more ways than one of killing an animal," so there are different ways of etherizing it. He says, he has learnt from experiment, that, when ether-vapour is administered *per rectum*, not only is a less quantity required to produce the desired effect than when inhaled, but that the effect is more quickly produced; to say nothing about—what in veterinary practice, at least, such a mode of introduction will prove, and what with us is a very great consideration—its comparative facility of administration, and, we think we may add, its greater safety of operation. In short, in our opinion, this new

channel of introduction holds out such advantages as to induce those who had hopelessly relinquished inhalation to commence a fresh set of experiments; and we should hope they will do so, and that it will not be long before we hear from some of our friends, informing us of their success: should which be such as Dr. Perogof has represented, we may hope that our practice, in more ways than one, will benefit by such a valuable addition to our pharmaceutical appliances.

THE MEDICAL REGISTRATION BILL AND MEDICAL LAW AMENDMENT BILL, have been withdrawn by Mr. Wakley, there being no hope of carrying them during the present Session of Parliament.

OBITUARY.

DIED, on the 4th inst., in the 86th year of his age, Mr. John Read, Inventor of the Stomach-pump. Veterinary no less than human surgery acknowledges a lasting debt of gratitude to Read's mechanical genius. And what made this genius shine the brighter was his anxious desire, on every occasion, to lend it where it was needed without any present reward, or even any certain prospect of a future one. There was, in fact, a great deal more about his character of the man of liberal-mindedness than of the mercenary tradesman;—he appeared to possess that attribute of true genius—an indifference to the *marketable value* of his productions.

“Mr. Read,”—we learn from *The Lancet*—was born and lived long in a humble station of life. He had devoted himself from natural inclinations to the study of hydraulics, and the invention of the stomach-pump arose out of the illness of a fellow-servant (he was then in the service of Dr. Marriott, a clergyman, in Kent), in which the medical man in attendance lamented the want of some means of injecting fluid into the stomach and bowels. He speedily produced an apparatus, which, with very slight alteration, is the stomach-pump of the present day.”

MISCELLANEA.

THE Members present at the General Meeting amounted to *fifty*, instead of “only about forty,” as will appear from the following list of their names:—

Baker, Geo.	Hutton, Robert
Bowles, Robert	Hutton, Josiah
Braby, Edward	Kent, W. H.
Chamberlain, Fred.	King, Francis
Cherry, F. C.	Lee, John S.
Cherry, Arthur	Mayer, Thos., sen.
Clark, Edward Thos.	Mayhew, Edward
Coleman, John (Tilshead)	Meginnis, W.
Dawtre, John	Percivall, William
Daws, Harry	Pritchard, Richard
Dean, Samuel	Robinson, William
Dick, William	Salter, Geo. H.
Dunsford, John	Sewell, Joseph
Ernes, William	Simonds, Jas. B.
Field, William	Skelton, Richard
Fowler, Abraham	Smith, William
Gabriel, E. N.	Sparrow, H. W.
Godwin, W. J. (Birmingham)	Spooner, Charles
Gowing T. W.	Tegg, George
Goodwyn, Edmund	Turner, James
Henderson, Alex.	Turner, Thomas
Henderson, Alex. B.	Varnell, G. W.
Heraud, W. W.	Vines, Richard
Hill, George	Wadlow, Chas. H.
Hunt, Robert L.	White, George.

HORSE FAIRS.

SEVERAL important horse fairs have recently been held in the northern counties, at which the prices of every description of horses were fully 7 and 8½ per cent. higher than at the last spring fairs, and on that occasion they were considered unusually high. The largest dealers acknowledge that they are unable satisfactorily to account for the fact. At Dumfries, Wigton, Carlisle, Preston, and several other places, the first class of horses, consisting of hunters, carriage-horses, and hacks, were sold at prices ranging from £30, £40, £50, and £60; and in a few instances as far as £70 and £80, and upwards, were given for very superior animals; there also being a very brisk demand by the largest dealers from almost every district in the kingdom. Old coaches and other aged horses met with ready sale amongst the farmers at figures ranging from £10, £12, £18, and £20. Strong heavy horses, suitable for railway, warehouse, and other draught purposes, were in great demand, and sold for £20, £25, £30, and £40 each. The few high-bred horses and ponies shewn were all sold.—*Morning Chronicle*.

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A SECOND CASE OF NASAL GLEET (PSEUDO-GLANDERS) IN HORSES,

SUCCESSFULLY TREATED WITH THE TREPHINE AND INJECTION.

By WM. PERCIVALL, *M.R.C.S. and V.S.*

VETERINARY science can boast of few greater improvements than the successful prophylactic measures which it has been the means of introducing against the generation and spread of glanders, and of that advance in the knowledge of the disease itself which has taught us to distinguish between what is and what is not glanders. Numbers of cases of the nature of the one I am about to narrate have fallen victims to the pistol or sledge-hammer, under the impression that they were so many cases of glanders; and numerous apprehensions have been entertained, and as many unnecessary precautions put into practice, under the same erroneous supposition. It has been said, and said with truth, "we had better take twenty precautionary steps too many than one too few;" and as it is admitted that glanders may for a time assume the form of nasal gleet, and does not unfrequently in the incipient stage so do, it behoves us to continue within a certain limit such precautionary measures. Nasal gleet, however, is no more glanders than glanders is nasal gleet or catarrh; neither is there any more likelihood, that I know of, of nasal gleet turning to glanders, than there is of inveterate or chronic catarrh, which, in point of fact, it may be said to be.

If we required any further proof of this than is afforded by a consideration of the history, the symptoms, and the pathology of these diseases respectively, we now appear to have it in the comparative results of treatment upon them. Nasal gleet, as I have shewn by former cases, and now am about to demonstrate

by one in addition to them, is a *curable* disease; glanders remains *incurable*.

On the 26th of September, 1847, a grey mare, aged ten years, was admitted for treatment on account of a yellowish mucopurulent flux from the near nostril, which had that day made its appearance without any preceding catarrh or other disorder, and was now unaccompanied by any signs of ill health; the mare feeding well, and shewing her usual spirits and willingness to work. There was not at this time any fœtor perceptible through the affected nostril, though a few days afterwards the discharge became offensive; but there was a small enlargement underneath the jaw on the same side, which, from its circumscribed tubercular feel, as well as from its situation, was evidently a swelling of the submaxillary lymphatic glands of the left side. This cast suspicion on the case; and on that account, by way of setting at rest all apprehension of contingencies, the mare was at once put into a loose box, and looked after exclusively by her own man.

At first her case was treated as though it had been no more than common catarrh. No benefit, however, accruing therefrom, kreasote injections were employed—syringed up the affected nostril; and, at the same time, copaiba balsam was given in full doses. All, however, proving of no avail, on

October 27th, I resolved on pursuing the same plan of treatment which had proved so successful in a former case (related in vol. xix of THE VETERINARIAN, p. 451). Accordingly, having had my patient cast, with the same small trephine I used on the former occasion—one I have had made for the purpose—I made an opening into the left frontal sinus, as close as was safe to the median line of the cranium. The skull proving unusually thin, unfortunately, notwithstanding the care taken, the pressure of the instrument forced the detached piece of bone back into the cavity of the sinus, from which with nothing I had at hand could I extract it. After she had risen, tepid water was injected into the opening, which ran away through the nostril turbid and loaded with flakes of more mucous than purulent matter. Air passed freely through the hole from the moment it was made.

The day following, the tepid water injection was succeeded by a kreasote one, made as for the former case; and this was repeated in the evening.

October 30th.—The flux is diminished; also the fœtor, which of late has been becoming more offensive, is lessened.

November 1.—Yesterday and this morning masses of effused lymph have been, with forceps, dragged out of the sinus through the opening, part colourless, part the same as the crassamentum of

the blood. The tepid water injection brings away at first flakes of purulent matter, after which it runs in a stream through the cavities and issues unclouded at the nostril. It is then that the kreasote injection is thrown in. The mare preserves her good health and spirits, and the opposite nostril remains unaffected.

November 17th.—The plug has been kept in until to-day, but will not remain in any longer; the injections having been regularly administered morning and evening. The discharge during the time has varied, sometimes more, sometimes less, retaining at all times, however, the same yellowish, thin, muco-purulent character. It flows in most abundance after using the injections; at other times, the man says it is but scanty. The trephined aperture is rapidly filling with granulations from the internal membrane; and although this compels us to leave out the plug, we are yet able to throw in the injections.

20th.—Such has been the progress of granulation since last report, that there seems hardly any aperture remaining admitting of further injection. There is, except at the times of injection, less discharge; also the fœtor is diminishing.

24th.—The day after last report, we found it useless to attempt further injection; the consequence has been that the discharge has almost ceased, amounting to nothing more than a little aqueous dripping. The swollen gland is growing looser and smaller, and the fœtor is hardly perceptible.

27th.—No discharge, no fœtor, very little glandular enlargement. The wound made by the reflection of the skin for the trephine has contracted to the size of a pea; the granulations sprouting out of it requiring erosion. In a word, all but this small sore, she might be regarded as "cured."

December 20th.—Her departure from the infirmary has been deferred until to-day, it being desirable to know that her gleet has ceased altogether; which appearing to be the case, she was now sent away, full of spirits, kicking and frolicking about, in excellent fat condition. Scarcely had she left the infirmary ten minutes, when the man returned, saying she had, in one of her gambols and fits of snorting, ejected a mass of green-looking offensive matter from her near nostril. Here was at once evidence that "the snake had been but scotched, not destroyed;" accordingly she was, not a little to our disappointment and vexation, once more admitted as a patient in our foul stable.

23d.—The nostril has been emitting, but not in any great quantity. Yesterday the discharge shewed a greenish tinge; to-day there is a small stream of thin purulent matter, much the same as there was formerly.

1847, January 11th.—From the date of last report until

to-day, the nasal discharge has been gradually diminishing once more. Still, there remains a trifling running, and this is evidently purulent, and can be perceived to be offensive: I therefore resolved to have recourse again to the trephine, this time making the opening into the *maxillary sinus*. To my surprise, however, after the trephined portion of bone had been removed, no discharge of air took place, as always happens when the passages are in their normal pervious condition; but, on the contrary, when I came to look into the aperture, I found the inside apparently full of callous effusion, partly osseous, partly cartilaginous, by which the interior of the sinus had become blocked up. There was, therefore, no possibility of making use of any injection: repeated attempts were made to force fluid through the cancellated structure within, but all to no purpose.

February 24th.—I have been waiting for the wound last made to heal up before I ventured to make another perforation into the same sinus. This I did this morning, in the usual situation for trephining, immediately over the anterior portion of the *maxillary ridge*, the former opening having been made into the supero-posterior part of the sinus. Still, no air rushed out on perforating the sinus again, neither could liquid be made to enter by forcing with the syringe. Here, then, was another failure; the discharge from the nose continuing, though scanty, and the effluvium from the affected nostril still being perceptible.

March 9th.—The wound last made with the trephine being nearly healed up, it was determined once more to open the frontal sinus, applying the trephine this time as near as practicable to the orbit, so as to avoid touching with it the bone which had already been perforated; and this shews the advantage of applying the trephine in the first instance as near as possible to the median line of the skull. No sooner was the insulated portion of bone perforated and displaced, than air rushed out as usual, though not with that seeming force or amount as happens in the case of unobstructed condition of the passages. Tepid water injected, issued immediately through the nostril, bringing with it a quantity of offensive yellow purulent matter, but no grumous clots, nor any matter that was green in hue. After the cleansing with water, the kreasote injection is to be used; and this practice is to be pursued morning and evening as heretofore.

March 22d.—The injections have been regularly administered, morning and evening. For the first week after their re-commencement copious defluxions of matter were brought away by them, fœtor being strong at the time, and the swelled gland underneath the jaw increased in magnitude. In fact, as very commonly happens, for some days after commencing injecting every symptom

appeared exasperated, though afterwards abatement of them commonly ensues. It seems very doubtful, however, whether any further injection can be employed, the aperture, although a wooden plug has been constantly kept in it, being nearly closed.

25th.—No injection has been admissible since the 23d. The discharge, which has of late been daily decreasing, has to-day ceased altogether, and but little fœtor can be detected. The glandular swelling is likewise subsiding again. In fine, once more the mare appears on the road of recovery.

April 1.—She continues well. Let her now be fed well, and regularly ridden out every morning.

May 2.—Not the slightest return of discharge; although there is, on applying one's nose to her nostril, still some faint fœtor detectible. The swelling has all but left the gland.

May 6.—Sent away "cured."

* * * I have the satisfaction of adding, that the other day I heard of the black gelding, whose case (of nasal gleet) has already had reference given to it—vol. xix of this Journal—and that he was reported to have been, two months ago, at which time he was sold at Tattersall's, in excellent health and spirits.

CASE OF INVERSION OF THE BLADDER IN A MARE.

By THOS. M. LEECH, *M.R.C.V.S., Ashbourne.*

To the Editor of "The Veterinarian."

Sir,—Cases, such as the above-named, being very rare (at least so far as being recorded), perhaps the following will not be devoid of interest to the readers of THE VETERINARIAN.

Your's, respectfully, &c.

ON the 24th of April I was requested to attend an aged cart-mare, which had foaled a few days previously, for what they called "having put her reed down." Upon my arrival I found the mare standing, shewing no symptoms of pain; the pulse 60, and full; breathing slightly accelerated; extremities warm. The external organs of generation were swollen, and tender to the touch, and presented ragged edges, which had occurred from several sutures that had been passed through the sides of the labia, to keep, as they said, "the reed up." I immediately removed the sutures, and proceeded to make a careful examination per vaginam, when, to their surprise, I found, instead of its being

the "uterus," or "reed," that it was the bladder which had become inverted, and which presented a very singular appearance, and could be plainly seen upon separating the lips of the labia, like a large circular map, occupying the cavity of the vagina. Upon bringing this viscus (that is the bladder) outside the external genitals, I was much struck with its appearance, being very much thickened in its coats, and extensive inflammation having destroyed the white appearance which the mucous coat in health possesses, being in several places discoloured, shewing evident signs of disorganization. Some little distance from the neck might be seen the termini of the ureters; and every now and then the urine might be seen to be ejected from these orifices, and to trickle down the leg, which had caused slight excoriation.

After some little consideration I determined to remove the bladder by ligatures, having tried to return it, but without success. Acquainting the owner with the great danger of the mare, and explaining to him the nature of the case, I proceeded to the operation, which consisted of grasping the tumour (that is the bladder), and carefully passing a strong ligature around the neck, taking care to be behind the termination of the ducts which convey the urine from the kidneys to the bladder: this accomplished, the further treatment of the mare consisted in bleeding, physic, and sedative medicines, mashes, &c. The ligature was tightened every day, the appearance of the viscus gradually altering, assuming now a dark purple colour, shewing evident death of the part. Now the constitution of the mare began to be disturbed, the pulse and respiration became greatly accelerated, yet the appetite remained good. On the sixth day after the application of the ligature I removed the tumour with the knife, which weighed no less than seven pounds: after its removal the mare evinced not the slightest symptoms of pain, but the symptoms generally were such as to lead us to believe that mortification, or the last stage of inflammation, had set in; which was verified after the mare's death, and took place three days after the bladder had been removed by the knife, or nine days from the application of the ligature.

Post-mortem Examination.—On cutting into the abdominal cavity the following appearances were noticed:—The bowels, which are principally situated in the anterior part of that cavity, were but slightly discoloured, and those which immediately occupied the posterior part were implicated in the inflammatory action which had extended itself from the vagina along the course of the ureters, and at the commencement of these tubes from the kidneys could be seen a large deposition of serous fluid which had become coagulated or consolidated. The vagina had undergone great alteration, being very much thickened in its coats, and discoloured;

the neck of the bladder (that part which was anterior to the part included in the ligature) was four or five times thicker than in a state of health, being in a high state of sphacelus; the lungs were slightly congested; the other viscera healthy.

Remarks.—From the termination of this case I am led to believe that inversion of the bladder is difficult in its treatment and dangerous in its result; but the disadvantage under which I laboured in this case was, in not being called in when the mischief was first perceived, finding the viscus in that engorged state which would result from the inversion as would preclude all chance of its being returned or re-inverted. If the inversion could not be overcome, then you must remove it, and ligatures seem generally to have been chosen; yet I should not employ them again, but amputate at once with the knife; for I am persuaded that the mischief which occurs is by the immense weight which the inverted bladder attains, and which has to be held up by the vagina, thus producing more inflammation; for if the tumour was removed by the knife, you would not have that amount of inflammation, but would have a much better chance of curing your patient. I think there is a case recorded by a French practitioner in THE VETERINARIAN which was successfully treated by ligatures, and the trickling of the urine being prevented from running down the legs by the use of an instrument fixed in the vagina, which carried the water beyond the point where it would have trickled down the legs, and caused excoriation.

July 10th, 1847.

WOUND IN A MARE—PARTURITION IN A DONKEY.

By Mr. J. YOUNGHUSBAND, Greystoke.

To the Editor of "The Veterinarian."

Respected Sir,—SHOULD the following cases merit a corner in your valuable Journal, they are quite at your service. Let me only first observe, it has given me the greatest pleasure, mingled with regret for his loss, to peruse the review of the late Mr. Youatt's work on the Pig; a work which was much wanted, as, in every thing I have read, the subject has been very poorly treated of, although an animal so valuable both to the great and small farmer, and, in reality, to all classes of the community. It appears to me that his disorders are, by most persons, ill-understood and sadly neglected, the veterinarian seldom having an opportunity,

and perhaps, from a mistaken idea, being seldom willing (if his opinion be asked) to treat them. But this I must say to the junior member of the faculty, if he intends being a general practitioner he must study to make himself competent to treat the diseases of *all* our domesticated animals; and this he can never do without the most careful observation and particular attention, and attentively studying the different characters and varying symptoms of each disease, as in country practice they present themselves before him: always remembering

“To cast round the world an equal eye,
And feel for all that live.”

WOUND IN THE BREAST OF A MARE.

Case I.—My attendance was required to a mare that, through an act of wantonness, had run violently against the handle of a plough, which had entered a little above the breast-bone, almost contiguous to the trachea, and extended upwards along the fore part of the shoulder-blade, causing a wound of a most alarming aspect.

My prognosis in the case was unfavourable. The horse-keeper had informed me there was a portion of the handle missing, and that it was his belief it was remaining in the wound. In this opinion I did not at first coincide, believing, if such were the case, I could have detected it by examination. My probes, however, which I had with me were too short; and it being night, I desisted from any further examination, ordered the place to be kept well fomented, put the horse on an antiphlogistic regimen, gave a dose of opening medicine, and ordered that she be bled if any irritative fever set in, the pulse not warranting me to abstract blood at this time. I attended again early next morning, and, from being better prepared, I soon found that the missing portion of the handle remained deeply imbedded in the wound, almost as high up as the top of the shoulder-blade. Now, as nothing less than an operation would relieve the animal from the foreign body, I took a scalpel, cut right down upon it, and with very little trouble extracted the portion of handle which had been missing. Its length measured four-and-a-half inches, and at one end two-and-a-half in thickness, the other terminating with a sharp point. The large end or base had entered the wound first, and, by the force with which the mare had run against the plough (it being an iron shaft with a wood handle), must have been a considerable way up the shoulder before it had broken, as the shaft of the plough shewed marks of having been deeply buried in that part. I next inserted a portion of tow through the two openings, ordered it to be kept constantly wet with digestive liniment, the surrounding parts to be well fomented, and the mare

to be carefully dieted. Through proper attention on the part of the owner, and the treatment used by me on such occasions, little constitutional disturbance took place, suppuration was established, and the swelling which might naturally be expected to take place was kept subdued. In fine, a few weeks made the mare convalescent, and, at the time of writing this, she appears to be as healthy as possible.

Case II.—One day, paying a visit to the above patient, my advice was requested concerning a donkey which had been unwell for four or five days. On visiting the beast I at once saw it was a case of protracted parturition, with, possibly, a false presentation, as a portion of placenta was seen hanging out from the vulva. I next proceeded to make an examination, when I found that the two fore legs and feet had fallen down, and that one hind leg was presenting, the head turned back upon the shoulder, and the breast pressing forward. By a little dexterity I soon placed the fore feet in a right position, but I did not so easily succeed in reducing the head. The passage being short, I had no great difficulty in examining the position of the head, yet I could not move it from its place of impactment. Being completely foiled, and having no instruments with me suitable for the purpose, I scarcely knew how to proceed; but, being near a blacksmith's shop, I went and got a small round rod of iron, two-and-a-half feet in length, and caused a short hook to be turned at the end, made it as smooth as circumstances would permit, returned to my patient, and besmeared the rod and my own arm well with lard. I introduced my hand and arm, pushed back the hind foot, while an assistant kept hold of the fore ones; slid my instrument along the under part of my arm until it reached the point of my fingers, which I had resting upon the head, and by a little manœuvring got it firmly fixed in the socket of one of the eyes. In this operation I found great benefit from having made the rod of sufficient length, so that I could maintain it steady with my other hand. After this I easily succeeded in bringing the head forward, and, from the parts being well dilated, found little difficulty in the extraction of the fœtus, which was dead, and in a state of decomposition.

Now the history of the case is this. A few days before my seeing her it was thought that she was labouring under an attack of strangury, and was treated for the same, from which treatment she appeared to get relief; but still, at intervals, she shewed symptoms of uneasiness, such as bowing her back, standing with her hind legs wide apart, straining as if she wanted to void something, and in this state she continued for two or three days. I am not sure when the portion of placenta made its appearance. Still the animal was left to work its own cure, no person seeming to under-

stand or perhaps to care about the business, and, being but a poor donkey, veterinary advice was not thought of. I am glad that I was in the neighbourhood, and that I happened to have met an acquaintance who desired me to give a charitable call, and lend my assistance, which I immediately did; and it has turned out greatly to my satisfaction, and, I believe, to that of all who saw the performance. I immediately extracted the placenta, and, as the animal was in a rather exhausted state, gave a little tinct. opii et spt. nit. æther, which had an almost magical effect in causing her to rally. From this time she rapidly recovered, and is now doing well. The thanks of the poor widow, and the expressions of good wishes to me for the preservation of her "little all", as she called it, completely recompensed me for my trouble.

ON THE DISEASES OF THE HORSES IN CANADA.

Second Letter from Mr. CHARLES to Mr. WILLIAM PERCIVALL.

Montreal, May 27, 1847.

My dear William,—I NOW send you an account of a broken-necked and a broken-legged horse; a description of three hermaphrodites; and an article I copied from the "*New York Spirit of the Times*," on taming vicious horses.

DISLOCATION OR FRACTURE OF THE CERVICAL VERTEBRA.

When in Upper Canada last summer, on my return from Newmarket to Toronto, a horse tied up to a roadside public house, about five miles from the latter place, attracted my notice, from the distorted appearance of his neck, which, on examination, left no doubt on my mind but that the vertebra had either been fractured or dislocated. Upon inquiring for the owner, I found he was a pedlar, both deaf and dumb, consequently I could not obtain any information from him; but the ostler informed me that the horse had "broken his neck" by falling into a ditch which he attempted to jump when turned out to grass; and that, when the accident happened, he was either three or four years old, and belonged to a gentleman at Toronto, but did not know his name. On the off side of the neck there was a considerable protuberance, with a cicatrix the breadth of a man's hand, and, of course, a corresponding cavity on the near side, in which a quartern loaf might have been placed. The head was carried very low down, inclining to the near side, and turned rather backwards.

FRACTURE OF THE METACARPAL BONE.

When travelling in the Eastern Townships, I met with an entire horse, named Tiger, which, from the circumstance of his having recovered from a broken leg, was called by the owner Broken-legged Tiger. He informed me that the leg was broken when two years old, and being a great favourite with his children, and a good constituted colt, he bandaged it up, and had a strong leather case made for the fractured part, sufficiently long to prevent his bending the knee, which he kept on until he was well or able to walk.

The fracture was just below the knee, and at the back part of the leg there was a considerable deposit of ossific matter, forming a sort of case to the flexor tendons, and, from the total absence of lameness and freedom with which he used his leg, their action could not be interfered with; of course, there was a good deal of distortion about the parts.

DESCRIPTION OF THREE HERMAPHRODITES.

In passing through Bradford, in Upper Canada, last summer, my attention was called by the driver of our conveyance to a grey horse (in the stable at a tavern where we stopped to bait our horses), stating he was "half a horse and half a mare." On proceeding to the stable, I met the proprietor (a medico) who informed me he had recently purchased him as a curiosity. The penis was situated about ten or eleven inches below the anus, and in the state of erection projected seven or eight inches from the point of the hocks. There was a small udder in the usual place, with two diminutive paps or nipples, and when I saw him, no appearance of testes; but upon meeting the owner in Toronto, about a month after, he informed me that one testis had descended into the udder, and could be distinctly felt. The horse was six years old.

In going from Toronto to Oshama, in the month of August, I saw in a field close to Duffan's Creek, in the township of Pickering, two bay horses, one of which, it struck me, was of this description; and my companion and self, on proceeding to the spot where the horses were grazing, found, to our surprise, they were both hermaphrodites, being in every respect similar to the one above described. One was four and the other fifteen years old.

TAMING VICIOUS HORSES.

From the "New York Spirit of the Times."

The Editor of the "Southern Planter" undertakes to let his readers into the secret of taming wild or vicious horses. We quote his account of the matter, in the hope that the experiment will be tried, as it can be very readily, and without cost. Some one says of this wonderful art, that it is founded upon a system of philosophy which is infallible, and universal in its application, and extends to all the animal kingdom. In regard to the horse, it consists in convincing him that you are his superior, and have absolute power over him. The system is somewhat akin to animal magnetism in its effects; though the process is widely different: but listen to friend Bott's disclosure.

The process of taming a very wild horse, which was never handled. This consists first by charming him by a powder which is obtained by taking the button from the horse's knee (by which I mean the horny substance growing on the inside or rather on the back part of the horse's leg, below the knee behind, and above it before). Dry this substance, and pulverize it; put a small quantity into a quill, and blow it into his nostrils: in a few minutes it will operate, and cause him to follow you, or permit you to handle his feet, or get upon his back; thus, with perfect ease, may a wild and vicious animal be made gentle and harmless. However absurd the above may seem, we have ourselves witnessed the most magical effects from the use of this singular prescription. We remember that, about a year ago, a horse tamer made his appearance in the city of Richmond, and offered to undertake the most vicious animal that could be produced. We saw him encounter an unbroken young stallion, which he subdued; in fifteen minutes he was climbing to the horse's back by way of his hind legs. Sometimes even stranger feats were performed, to the great wonder and admiration of our citizens. We were not the depository of this secret, and, therefore, are not guilty of any breach of confidence in betraying it; but we know he professed to use no other means to subdue the horse than the one above alluded to.

P.S.—I do not place much credence in this statement, because I know the Yankees "lie like hatters."

Believe me,

Yours, most truly.

CASE OF FRACTURE OF THE SPINOUS PROCESSES OF THE DORSAL VERTEBRÆ.

By JAMES TURNER, *M.R.C.V.S., Montreal.*

REFERRING to my note book, I beg to solicit your attention to a very singular case. I was called upon, on the 17th of October last, to visit a horse at the government stables, belonging to Captain Jones, of the 23d regiment, Welsh Fusiliers, which I found very unwell, off his feed, and "stiff all over," as the phrase goes, much tucked up in the belly, with his anus open, and discharging quantities of dirty mucous matters, along with a few hard portions of excrementitious substance. His ears and nether extremities were of their natural heat—pulse strong, at 36—breathing easy and regular. In making the necessary inquiry about the previous usage and treatment of the horse, I found he had come from Lorel on the 15th, a distance of 45 miles, to run a steeple chase, which was to come off in the neighbourhood of Montreal on the 17th. The horse had been two days in Montreal prior to the arrival of his owner, and was off his feed all the time; but the young man who had charge of him did not call in any advice before his master arrived, not thinking the horse so bad as he really was. His owner informed me, that on the evening of the 14th he had been leaping him at a fence and ditch as training exercise preparatory to the steeple chase. On the 17th he shied at one of his leaps, which he took very awkwardly, and fell with great force upon his right shoulder, injuring his rider very much in the face and right arm. The horse was tried at the same leap a second time, but could not take it. Next morning he was put on board of a steam-boat for Montreal. The day was cold and damp, and there, no doubt, along with the injury mentioned, he contracted a heavy cold, and had a very bad cough by the time I first saw him. On being informed of the fall, I had him stripped, and on examination found much inflammation and swelling on the near or left side of the withers, with one of the spinous processes of the dorsal vertebræ pointing through the skin, which I then believed to have been caused by the fall. Being afraid of congestion of the lungs from the slow and full pulse, and the probable injury of the chest from the fall, I took at once two gallons of blood from the jugular vein, and gave half an ounce of nitre with one drachm of tartarized antimony in a bran mash, bandaging all four legs, and administering a clyster, which seemed to give some relief.

18th.—I found him much the same. The pulse 42, and weaker—extremities and breathing all natural, feeding rather better.

The anus still open, with slimy discharge. Tart. antim. and nitre continued.

19th.—Much the same, except that the pulse is quicker and weaker. Seeing that sundry very dry, small, costive dung-balls had dropped from him during the morning, his owner was extremely anxious that he should have a dose of physic, which I refused to give, knowing that, from the irritable state of his bowels, &c. it would exasperate rather than counteract the inflammatory action which was going on. I administered a fever ball, with clysters, as formerly.

20th.—Much the same; feeding poorly—breathing freely—extremities natural. Anus still open. Pulse 50. Ball, &c. as yesterday.

21st.—Much the same, except that the breath is beginning to smell rather strong. Feeding a little better—extremities still naturally warm. Ball, &c. as yesterday.

22d.—Breath smelling more unpleasant this morning; pulse sinking—a slight discharge of matter from the nose, having a very putrid and offensive smell—the bowels not quite so costive, therefore I discontinued the small portion of aloes which I had used in the fever balls, but continued the nitre, tart. antim. and digitalis. I applied a blister to his chest, which acted but slightly. The extremities are now cold—the eyes sunk and full of water—tongue and gums yellow, as if indicative of some derangement of the biliary secretions.

23d.—Pulse still perceptible, and nothing more—the discharge from the nose much increased—legs cold, but changing from cold to hot, and from hot to cold alternately, the fore legs colder than the hind ones. Dressed the blister a second time, which caused a good discharge this day. He is growing weaker.

24th.—Pulse small, but still perceptible; discharge from the nose much the same in quantity, quality, and smell. The horse is now very weak—his legs and ears cold—appetite gone—and breathing with some difficulty (the first time I have found respiration disturbed)—very restless, and emitting a slow murmuring noise through the air-passages. I was this morning kindly favoured with the opinion and advice of Mr. C. Percivall, V.S., Royal Artillery, who pronounced him a dead horse at first sight, but advised me to keep up the counter-irritation, as being the only thing I could do to serve any good purpose. I therefore stimulated all his legs with turpentine liniment—blistered both his sides—inserted two rowels in his chest—and gave clysters, as usual, ordering oatmeal gruel as drink, with nitre and tart. antim., as giving balls now distressed him very much. He continued in this state till about midnight, when he dropped and died.

On post-mortem examination, I discovered the left lung to be much congested, black, and enlarged. On the anterior lobe being cut into, it presented large quantities of white purulent matter of a cheesy-looking nature, which certainly resulted from the formation of a tuberculous deposit. The right lung was but slightly inflamed; no congestion of blood, nor particular enlargement about it. The pleura of the left side was much inflamed and discoloured: the right side was but slightly so. The heart was very soft, and full of coagulated blood: the liver also participated in the disease. It was dark-coloured, and congested with blood. The biliary ducts were full of bile of a very high colour, something between a yellow and a green. The pancreas was much enlarged, far beyond the ordinary size: it was, indeed, the largest one I ever remember to have seen; and was, no doubt, the result of chronic disease, which must have been in existence for some time. I have no doubt the cough which I found him labouring under on the first day was more in consequence of this chronic derangement than any cold caught upon the deck of the steam-boat, as I then supposed. The bowels were free from inflammation or discolouration of the slightest degree. On the shoulders being removed, and cutting down upon the spinous processes of the dorsal vertebræ, I found six of those forming the withers fractured obliquely, at about two and a half inches from the top, on the right side, whence they were driven to the left side, where the fractured parts declined to about half the length of the processes, then sunk down among the muscles on the left side of the shoulder, carrying along with them the cervical ligament, to which they remained firmly attached. The inflammation and discolouration surrounding the seat of the fractured bones were very great; and, if I am right in believing that chronic disorganization had been going on previous to the fall, at least in the biliary organs if not in the left lung, the fresh cold caught on board the steam-boat might have assisted in hastening the death of Capt. Jones's gray horse.

I am, Sir, your most obedient, &c.

Montreal, December 30, 1846.

CASE OF EMBRYOTOMY IN A COW.

By Mr. NELSON, Highfield, Sheffield.

June 5th, 1847.—I WAS requested by Mr. Slack, of Sheffield, agent for the Agricultural Cattle Insurance Company's Office, to go down to Robert Wilkinson's, Cock-lane, Harborough, he having

been informed by Mr. Griffiths, inspector for Rotherham, that R. W. had a cow which had been in a state of great suffering all day from labour pains; that the calf was dead, in an unnatural position; and that every means had been used to extract the calf, but all to no purpose, the cow continuing unrelieved. In his (Mr. G.'s) opinion, there was no hope but to slaughter the cow.

I lost no time, but took my newly invented parturition forceps, and hastened to the spot. When I arrived, I found two men stripped, trying to extract the calf. I inquired in what position the calf was, when I was informed that the head was directed backward, and told by one of the men, that, if he could not extract the calf; he was sure I could not. Well, well, I said; I must try what can be done with it. So I stripped off my shirt, put on a mackintosh dress which covered me from head to foot, for the operation, and then gently introduced my hand up the vagina, wherein I found both fore feet impacted, but without the head. From the length of time, however, the cow had been in the pains of labour, and from the repeated trials that had been made to relieve her, the vagina was so swollen, that she instantly commenced violently to strain, so much so that it was with the greatest difficulty I could introduce my arm; no sooner had I done so, than, in spite of all we could do, she lay herself down. In this way much time was lost; but keeping her standing by handling her nose and pinching her on the back, I at last ascertained that the calf lay turned upon its back. I now saw no means of relieving her, from the swollen condition of the vagina, but by embryotomy. So I passed a rope around one of the fore legs of the calf, and introduced my hand as far up to the shoulder as possible, taking with it a slide embryotomy knife, invented by me some years ago: a knife that can be taken through the cavities with perfect safety to the place of action, where the blade can be opened and shut with the thumb at pleasure. I then opened the blade, and drew it down the limb from as far as I could reach; opening the skin to below the knee, and at that point incising completely round the leg. I then ran my hand up between the skin and flesh, and reflected the skin off as much of the limb as I could, when, by the assistance of a little pulling at the rope, the limb came away. I then searched for the head, but found it was still out of reach. I next took off the other limb in the manner I had the first, in order to give room; and once more searched for the head, but found it was still out of reach. I then introduced my forceps with F1 attached to the rod, and secured them to the skin about midway along the neck. I told the assistant holding the forceps to gently drag in the direction that I thought would bring up the head, when by this means I was enabled to reach one of its ears with my hand.

I bade the assistant to let go his hold, when I took the forceps in my hand, and applied them to the ear, and by the assistant gently pulling in the direction I pointed out, the nose was brought into my hand. I then directed him to keep his hold till I brought out my hand to take in a rope to put over the nose: this being done, I bade the assistant to gently push instead of pulling by the ear, when the nose was brought right into the passage; afterwards I applied the forceps to the lower jaw, and drew it out until a rope could be applied over the head, when with much difficulty the calf was extracted, the cow having been twenty-one hours in labour. As soon as the cow had recovered herself a little, I withdrew four quarts of blood from her, gave her a dose of laxative and fever medicine, and smeared the vagina with emollient liniment. I also clothed her well, and directed that she should have a gruel diet, and left her until the morning of the 6th. Great irritation is now going on in the vagina and uterus, with frequent straining. I gave a dose of the medicine previously administered, and dressed the vagina with the liniment twice per day. A little appetite for food now appears, but I allowed only gruel.

From the 7th to the 10th, the cow continued much the same, except that the appetite was returning. I ordered a little simple food.

From the 10th to the 18th, the appetite increased. Gave a dose of medicine occasionally, and continued dressing the vagina until all the secretions were thrown off.

18th.—Discharged her, well, giving from eight to nine quarts of milk.

ON THE CHOKING OF CATTLE IN THE ADMINISTRATION OF MEDICINE.

By M. CUMING, M.R.C.V.S., Myres, by Banff.

SIMPLE as the administration of medicine to cattle may appear, and often as it is done by the most ignorant with impunity, it yet requires an amount of tact to do it properly, and is sometimes productive of consequences, when done otherwise, which many who practise it little think of. It is true, accidents from this cause are from time to time known, or *surmised*, to have occurred; sometimes in the hands of the would-be doctor, sometimes in those of

the owner of the animal, or of his servants. But as neither of these parties are in general willing to acknowledge liability to fall into such an error, the veil of oblivion is quickly and quietly drawn over the case, and the animal is said to have been visited with some disease of an unaccountably sudden and mysterious kind. Although such is the ordinary course that cases of this kind take, it is surely inconsistent in the veterinarian, who claims for his profession the title of a "science," to have recourse to such silly subterfuges, or to submit to become the dupe of them in others. There can be no doubt that it is ultimately more for his professional reputation, and the interest of his employer as well, that all such cases should, if possible, be traced to their proper causes, and the means of prevention or remedy that exist pointed out. There are many who pride themselves on their dexterity in performing operations in farriery, and it may, no doubt, wound the self-esteem of such persons when told that they have not only bungled the giving of a dose of medicine, but they have also endangered the life of the patient they were attempting to save. Still, if by such exposure the animal can be preserved, or the operator induced to adopt a safer mode of proceeding in future, it is surely better to speak out. Besides, candour has nothing to fear from a disclosure of the truth.

Having met with a number of cases in which untoward results occurred, or were likely to occur, from the improper mode in which the animals had been drenched, I propose, in the following paper, to draw the attention of farmers, and especially of veterinarians, to the subject, so that the experience of others may be brought out, and a more satisfactory pathological creed established in regard to it. It seems to me the more necessary at present that well-defined information should exist upon this point, from the position the veterinary surgeon is likely by-and-by to occupy as arbiter in cases of dispute between the insurers of cattle and the insured. Suppose, for example, an insured animal to fall ill, and to have a dose of medicine awkwardly forced upon it by the owner, or some one in his service, and that evil consequences result—that, in short, the animal dies. It would come to be a very nice point in medico-legal inquiry, whether the Insurance Company was liable for the price of the animal. I, therefore, purpose to give the amount of my own experience upon the subject, as follows:—First, a detail of the cases I have seen, in the order in which they occurred; and, second, such remarks as they may suggest or warrant in regard to the causes tending to produce accidents in drenching; the proper and improper modes of doing it; the pathological conditions resulting from accidents happening in this way, with the remedial

means they admit of, and the bearing of the whole on the subject of cattle insurance.

Case I.—Sunday evening, June 1, 1845, I was called to see a cow of rather delicate constitution at L ——. The owner keeps but one, and I had attended her about six weeks previous for a slight pleuritic attack. I found her labouring under considerable gastric disturbance, which I attributed to her having been feeding the day before on cut food, consisting mostly of aquatic unbelliferæ and ranunculaceæ, the acrid qualities of which are well known. The pulse was full, hard, and about 70. I bled her freely, and ordered a pint of linseed oil to be given her; but as it was likely to be some time before it could be procured, I did not stay to see it administered. It was given her late at night, and early in the morning the owner came to me, saying his cow was much worse, and would not live long. On seeing her now, I found the symptoms altogether changed, and the animal presenting the appearance of a severe pulmonary inflammation. The pulse was 80, but sharp and contracted, instead of being, as on the previous night, full and hard. She remained obstinately standing with her head and neck extended, and breathing very fast and laboriously, and would neither eat nor drink: no appearance of purgation. I gave her a strong dose of a saline purgative, and ordered a dose of tartarized antimony and digitalis to be given every two hours; thinking, from what I had seen of her before, that she was affected with inflammation of the lungs or pleura. I saw her again in the evening, twelve hours after the exhibition of the purgative. The pulse was then getting quicker and weaker; breathing not so fast, but more laborious; slight emphysema behind the shoulder on the left side over the upper third of the ribs; medicine beginning to operate, but had tasted neither food nor water. I was now more puzzled with the case than before, and therefore commenced an examination of the organs of respiration with the ear. On applying it to the throat before the dew-lap, to the point where the trachea enters between the two first ribs, I could distinctly hear, or rather felt, as it were, something oscillating with the windpipe; and on attempting to give her some of the sedative medicine as prescribed above, I found she had considerable difficulty in swallowing, but on examining the mouth and fauces I could find nothing amiss. The idea of a portion of the linseed oil having got into the trachea now occurred to me, and I commenced a cross-examination of the owner, who gave it, and another person who was present; and, after some prevarication, got them to own that the beast had coughed violently when the oil was being put down her throat, but that her head was not let down till the dose was finished; that she appeared very ill, and almost fell when the job was done, and that

the quickened breathing had begun from that time. I was now convinced that my surmise was correct, and having some strong liquid blister with me, I applied a smart dressing of it along the whole length of the lower part of the neck in the line of the trachea on each side, rubbing it severely in for ten or fifteen minutes. It rose almost immediately, and, in a very short time thereafter the animal took a full drink of water, and began to eat. The irritation produced by the blister was severe, and gave her a good deal of external pain, but she had no other unfavourable symptom. The breathing became gradually moderated, she purged freely, and in ten days or a fortnight was quite well, with the exception of the emphysema, which was several weeks before it disappeared from her back.

Case II.—August 13, 1846. I was called to the farm of K—, distant about nine miles, to see a two-year old quey, affected with hæmaturia, or bloody urine. She had been going in a park when the owner observed her ill, and it was not known how long the disease had continued. She was considerably reduced, both in condition and strength, and the discharge from her bowels was black, foetid, and of very bad appearance. I advised that she should get an ordinary dose of physic, followed by stimulating medicines and restorative treatment, and left her, the owner promising to send me word in a day or two how she was. Next morning I received a note from him informing me that the quey had got her medicine as directed, one of the men on the farm having administered it, and that in less than half-an-hour she was found dead. Although I considered the case far from being a hopeful one at first, I was by no means prepared for such a sudden termination to it. I therefore went in the evening, and made a post-mortem examination; and, in addition to the appearances of the original disease, I found in the air-passages of the lungs a considerable quantity of the medicine given, which was easily identified by the sight and taste. It had been given in oatmeal gruel, which there was no danger of mistaking for any natural or diseased secretion that may be in the lungs. It had also been mixed with strong home-pounded ginger, the particles of which were not very minute, so that small hard bits of it could be got sticking in the smaller bronchi, and which, on being chewed, told sharply what they were, and whence derived. I was in no hesitation to say that the *sudden* death of the quey was due to a portion of the medicine having found its way into the larynx, and thence down the trachea to the lungs, producing asphyxia and death; of course, with more speed and certainty from the animal being previously weakened by disease.

Case III.—October 9. A cow, six years old, at J—, affected

with functional disease of the first stomach, had got a dose of physic the day before, which had operated. I advised the owner to give her a few bottles of salted gruel to make her drink, and then keep up the action of the purgative. Next morning I was sent for, and told that the cow was much worse, and not expected to live. I found her standing with her head and neck stretched out, breathing very fast and laboriously, and heaving at the flanks—pulse quick and hard—ears and feet rather cold—a good deal of mucus coming from the nose, and round the margin of each nostril a circle of hardened mucus mixed with particles of oatmeal gruel. There was considerable swelling and pain about the throat, and also emphysema of the posterior part of the neck, and on both sides of the body behind the shoulder, marking out exactly the line of the diaphragm—being confined entirely to the region of the thorax. The owner said that he attempted to give her the gruel the night previous, as directed, that he had hold of her by the nostrils with one hand, and the gruel in a bottle in the other; and that, on trying to swallow the first mouthful she coughed violently, and made a desperate plunge forward, so that he was obliged to relinquish his hold, and that he did not persist in giving her more of it. He also stated that the distressed breathing, &c. had commenced immediately after this, and that she had neither tried to eat nor drink since. I attempted to pass some liquid down her throat, and found that she had great difficulty in swallowing from the soreness of the parts. It was evident from the symptoms of the case, coupled with its history, that the animal had been choked by a portion of the gruel finding its way into the air-passages; and that, in consequence, a rupture had occurred in one or other of the bronchial tubes, permitting the escape of air into the cavity of the chest, and giving rise to the external emphysema, as was shewn by the fact of its being at first exclusively confined to the region of the chest. In treating the case there were evidently two indications to fulfil: first, to subdue by active depletion the acute inflammation of the air-passages; and, second, as at the same time there was great constitutional depression arising from the extensive irritation of the cellular membrane, to pursue, coincidentally with the antiphlogistic treatment, such a course as should prevent the patient sinking under it: so the case, on the whole, looked a very hopeless one. But I had the satisfaction of having a candid owner, who allowed that “if the animal died his own hands had done it.” I drew blood from the jugular vein in the usual manner, but only obtained a small quantity, in consequence of the emphysema extending rapidly up the neck from the sternum, as soon as the skin was cut, and in a short time closing the orifice. I had better success with a severe blister applied to the throat and along

the whole line of the trachea: on both sides it rose rapidly, and produced considerable amendment. I tried fomentation and warm bathing for relief of the emphysema, but with little advantage; and, ultimately, had recourse to puncturing and the insertion of a number of small setons. The bowels becoming constipated, I gave another purgative: considerable caution in the administration of which was required, in consequence of the very irritable state of the glottis. In a few days, when she began to eat a little boiled food, I advised the use of a tonic and restorative treatment. In a fortnight the general health was pretty well restored; but it was seven or eight weeks before the emphysema disappeared. It is, perhaps, worthy of notice in this case, that, although the extravasation of air made its appearance at first only in the region of the lungs, it soon extended to the subcutaneous cellular tissue of all the adjoining parts, being bounded only by the closely adherent attachment of the skin to the muscular fascia about the elbow and stifle. When at the worst, the animal presented to the eye a rotundity of form not to be met with even in the highest-fed Christmas ox. There was neither prominence nor depression to be seen from the neck to the tail. In fact, she resembled nothing so much as a huge overgrown porpoise stuck upon four pins.

Case IV:—Congestive fever (quarter-ill), having made its appearance among the young stock on the farm of S —, I was consulted by the owner, who lives in Banff, if anything could be done as a preventive. I advised the use of a dose of physic and change of food. There were twenty-one calves to which this was to be applied; and the medicine was prepared by a druggist in town in separate doses for each animal, and its administration entrusted by the owner to the servants on the farm. It was given about mid-day on the 11th, and the animals were turned out, one by one, as they got it, into an exposed park on a cold chilly day, and no more looked at for several hours. When they were to be housed in the afternoon, one of them was found dead, and several more of them very ill; and a man was sent for me express. On hearing the case, I was immediately struck with the conviction that a mal-administration of the medicine had taken place, and I questioned the man as to the manner in which it had been given. He said that they made much resistance, and required considerable force to hold them, and coughed and “glagered” a great deal; but that the grieve held them by the nose and poured it down, and that most of them went away blowing desperately. It was dark before I got to the farm, so that I did not then see the one that was dead; but I found the other four very ill. They were breathing very quick, and evidently much distressed; head and neck stretched out; nostrils expanded; coughing occasionally, and blowing from

the nose a good deal of mucus, mixed with gruel, ginger, &c. (the medicine contained ginger, and was given in gruel). Round each nostril there was a dry hardened ring of the same material, the nose and breath very hot, feet and ears cold, pulse quick and weak. I made further inquiries of the other servants about the way the medicine had been given, and got the same account as previously, and I had now no doubt in saying that a portion of the gruel had been recklessly forced into the lungs, and that inflammation of these organs was the consequence. I proposed bleeding them. Two of them bled moderately well, but the third I was obliged to stop with before getting away a pint, in consequence of syncope coming on, and in a few minutes it fell and died in that state. The fourth I did not bleed; I, however, advised the grieve to separate them from the rest, and put them in a quiet, warm place, and blister the throat along the whole course of the trachea; but he did neither of these. In the morning I made a post-mortem examination of the two dead animals. In the one that died first (in the park), I found a large congested spot on one of the shoulders, involving the super and sub-scapular muscles, a state of the parts which evidenced quarter-ill of a number of hours standing. The lungs were also much congested, and thin black bloody serum ran from the mouth and nose. The mucous lining of the trachea and bronchi was black and injected to an extreme degree; and, on cutting up the bronchi to their terminations, I found numerous clots of gruel, particles of oatmeal, sids, and yellow ginger, mixed with blood and mucus. There were a few ecchymosed spots under the serous covering of the heart, and black uncoagulated blood in its cavities on both sides. I examined the alimentary canal from the pharynx to the rectum, and could discover no trace of excitement or undue vascularity in any part. The contents of the stomach were moderately soft, and those of the colon and rectum black, foetid, and very unhealthy in appearance. The physic had not operated. The other calf (the one that died while being bled) presented the same natural appearance of the alimentary canal. There was no symptom of quarter-ill, nor were the lungs much congested, but the most intense marks of inflammatory action in the trachea and bronchi, accompanied, as in the other case, with clots of blood, mucus, gruel, ginger, &c.; and in both sides of the heart, and the large vessels of the thorax, a venous uncoagulated state of the blood existed. The other three calves were still alive, but much distressed for breath and reduced in strength, the inflammatory state of the lungs being evidently gaining ground. I again advised the blistering of their throats, and to have them put into a warm house by themselves (for all this time they were standing in an open court), but no attention was paid to the advice. The

purgative was by this time (the forenoon of the 12th) acting freely with all the rest of the calves; and from this date I did not hear more of them for three or four days, when I was told that the three that were ill when I left were dead, but had been skinned and buried without letting me know—most likely, for fear of further disclosures. I was, however, informed by one of the cattle-men on the farm, that their lungs were in the same state as the others—‘black,’ he said, ‘inside and outside.’

I have entered into the details of these cases the more fully, as a report was circulated at the time when they occurred that the calves had been poisoned by something improper being introduced, either intentionally or accidentally, into the medicine; and the owner, influenced by such report, no doubt, threatened an action of damages for recovery of their value. Although not specially called upon by the object of the present paper for a refutation of such a groundless charge, yet, as similar surmises may arise in other cases, I may be allowed to mention two things which shew its utter fallacy: First, that the dose of medicine given contained only the ordinary purgative materials daily administered by every veterinarian, and in a quantity proportioned to the size and age of the animals; and, second, that they died under a train of symptoms which no known medicine is capable of producing (whether poisonous or not), provided it be properly introduced into the stomach; but which the most harmless material, even *water-gruel*, will occasion, if forced into the air-passages, as I have shewn reason to believe it was in the cases cited.

Case V.—Nov, 24th, at M——. A cow, four years old, had obstinate constipation, coupled with derangement of the uterus, being at calving. She had a strong purgative, which, however, operated tardily. I ordered her to have salted gruel twice a-day. On giving the second or third dose the owner himself choked her. She coughed violently, and made considerable resistance to taking more of the gruel. On seeing her a short time after, the usual symptoms of bronchitis were very evident:—quickened breathing, with neck stretched out, and lifting of the sides; occasional hard irritable cough; dilatation of the nostrils, with blowing out of mucus, &c.; hot mouth and breath; and a quick, sharp pulse. In this case, the owner was holding the cow by the nose while giving the gruel, but quitted as soon as she coughed; and from this, and there being no symptoms of congestion in any part of the lungs, I was led to infer that the gruel had got no farther into the air-passage than the larynx, the bronchial symptoms being due to an extension of the subsequent irritation. As the bowels were still confined, I gave, with considerable care and difficulty some more physic. I applied a smart blister along the course of the trachea,

especially about the larynx, and ordered small doses of tartarized antimony to be given every few hours. The blister acted well upon the throat, the bowels were soon relieved, and the inflammatory action subsided rapidly. In three or four days she appeared nearly well, with the exception of a slight cough, and no other untoward appearances occurred, except that she calved a week prematurely; both cow and calf, however, did well.

Having thus given a short account of those cases which have come under my observation, in which imminent danger threatened from the improper administration of medicine or other substances, the remarks which I shall offer upon them naturally arrange themselves into two groups—the first connected with the causes of the evil, the second with its effects: the cause, of course, comes first.

To make the subject plain, especially to the non-professional reader, it seems necessary to give a short outline of the anatomy and physiology of the organs of respiration (breathing) and deglutition (swallowing), in as far as they are related to each other.

The passage of the inspired air to the lungs is through the nasal chambers or nose, the pharynx, larynx, and trachea or windpipe; that of the food from the mouth to the stomach is through the fauces, pharynx, and œsophagus or gullet. Now, it has to be noticed, that when the head and neck are extended in a horizontal position, the air-passages lie uppermost in the face and anterior part of the head; but in the posterior part of the head and along the neck, the food passage or gullet lies uppermost. In consequence of this arrangement, it is plain that the two passages have to cross each other, and this they do in the pharynx, the cavity or pouch of which is their common point of intersection. This crossing may be not inaptly compared to an inverted letter $\text{a} \times \text{a}$ a being the mouth, b the nostrils, c the œsophagus or gullet, d the trachea or windpipe, and e the cavity of the pharynx, into which both the superior and inferior food and air-passages open. From this description it will be seen, that both the breath and food pass through one common opening, the pharynx. It is also obvious that, if respiration and swallowing went on at the same time, there would be a general mixing of the ingesta, whether food or drink, with the air going to the lungs, and consequently a continual choking. Let us examine, therefore, the precautions which Nature has adopted to prevent such an evil. In the first place, the glottis and epiglottis, which form the upper and terminating portion of the larynx, and which are designed only for the transmission of air, are covered by a delicate and highly sensitive membrane furnished with involuntary nervous sensation, so that warning is given by their immediate closure of the presence of any intruding foreign body, without the round-about course of awaiting a command of

the will. Every one must be sensible of this who has ever felt the spasmodic choking cough produced by a drop of fluid or a morsel of dry bread attempting to get the wrong way, as it is said. This, then, is one ever-watchful guardian which Nature has posted at the commencement of the passage to the lungs, to prevent the admission of any thing but air into these delicate organs. But the prevention of such an evil has not been left to the charge of one single arrangement of parts; not only has it been provided for that nothing hurtful shall pass *from* the pharynx through the glottis into the inferior air-passages without immediate warning being given and an attempt made for its detention, but it has also been arranged that animals have the voluntary power of preventing the ingress of any kind of ingesta *into* the pharynx during the time the respiratory current is passing through it. This is effected by the means of a fold or curtain (*velum palati*) of muscle and membrane suspended from the palate or upper and back part of the mouth, between that cavity and the pharynx. In animals that respire entirely through the nose, such as the horse and ox, this curtain is of such depth as to shut off the one cavity from the other, and by this means the animal is enabled to respire freely through the nose during the continuous act of gathering and masticating its food. In the natural act of swallowing, the food is wound up into a bolus by the action of the tongue and palate, and carried backwards to the fauces beyond the root of the tongue. From thence it is forced by the action of the parts through the opening at the lower edge of the *velum palati* into the dilated pharynx, carrying before it the epiglottis, which thus performs the office of a lid or valve, shutting up entirely for a time the upper opening of the larynx, and leaving the food only one means of exit, namely, the opening to the gullet. By this double arrangement of parts the animal, when at freedom, respire and swallows alternately, the natural structure of the organs being such as to prevent the one action from interfering in the least with the other. And as a third and still farther guard against accidents among the lower animals—at least, among the herbivora—they, in the natural condition, feed and drink with the head in the dependant posture, so that no ingesta of any kind can be sent to the organs of deglutition but by the will of the animal, and when the parts are in a state of preparation for its reception. It needs only a slight examination of the difference between the *modus operandi* which Nature has thus appointed in regard to swallowing, and that which is rendered necessary in the forced exhibition of medicine to cattle, to shew us why accidents are liable to occur. Cattle medicine is generally given in the fluid form, for reasons which it is needless here to mention, and is poured into the mouth from a bottle or

horn. The first part of the operation, therefore, is to *get up the head*. This is, no doubt, necessary towards a forcible administration of the dose ; but as it is a perversion of the ordinary plan of Nature, the least evil that can be said of it is, that it renders the operation particularly liable to accident. The head being got up, it is often no easy matter to keep it so, and animals are troublesome and difficult to hold. As a convenient part to grasp, and affording a good purchase for keeping up the head, the nostrils are commonly laid hold of, and the drinking utensil being introduced into the mouth, the liquid is poured down the throat. The animal is now obliged to swallow by the fluid running over the back part of the tongue into the opening of the fauces ; and should it require to breathe before the operation is finished, it must be cautious to shut off the cavity of the mouth from that of the pharynx during the time the respiratory current is passing in and out through it. This, however, it will generally manage to do if the respiratory action of the nostrils is left free and unimpeded. But if the nostrils are firmly grasped, or the power of breathing through them in any way obstructed, the consequences are very different. The animal, if it must breathe, can now do so only through the open mouth, which at the same time is full of fluid ; and instead, therefore, of breathing freely, it can only gargle, and the instant it attempts to do so, a portion of the fluid trickles down upon the sensitive parts about the glottis, which occasions a strong convulsive cough, and consequently a severe struggle to reject the fluid. Even still, if the head be at once let go, the animal holds it down, and the dependant position, aided by the expulsive action of the cough, rids the rima glottidis of the offending matter. But if the case is differently managed—should the operator still persist in keeping up the head—what follows ? As a last resource, another cough is attempted ; but before this can be accomplished the breath must be first drawn in, and a portion of the fluid in the mouth and pharynx is carried along with it into the larynx and trachea. This again produces another cough and another inhalation of air, accompanied by another portion of the fluid, and the further progress of the evil comes to be a question between the strength and determination of the operator and the animal. If it can get quit it will ; if it cannot, and if he persevere, he will as certainly put the medicine into the lungs, as he would have put it into the stomach had he adopted a better system of proceeding. Such being the consequences which are likely to follow an improper method of administering even the blandest fluid, how much worse must it be when the drench contains, as it often must, a quantity of ginger, pepper, or other stimulating matter, which, by its irritating qualities, tends to produce coughing. It is then rendered doubly dangerous, both

in the administration and the after-effects, should a portion of it happen to get into the air-passages.

Having endeavoured to point out the dangers of an improper system of administering medicine, it may be expected that something will be said as to how it may be done with safety. And this, a very little attention to the physiology of the act of swallowing will enable us to do. Left to itself, as has already been stated, the animal drinks with its head in the depending position. Giving it fluid under constraint, this can hardly be effected; but the nearer we approximate to it the better. The head should therefore be elevated above the horizontal position as much only as will suffice to cause the fluid to gravitate to the back part of the mouth. By this precaution the animal has a voluntary control over the organs of deglutition which it has not when the mouth is much elevated. In addition to this, the respiratory action of the nostrils should be entirely free, and, if possible, the motions of the tongue and lower jaw unimpeded. To obtain these conditions, and at the same time secure the animal properly, one of two ways may be adopted. Either the hand may be placed in the mouth, the fingers pressing upon and retaining the upper jaw, while the head is firmly seized between the arm and thigh; or, the cervix or neck of the lower jaw may be grasped in the hand, the thumb being in the mouth immediately behind the incisor teeth and under the tongue. By either of these ways, with the aid of an assistant (when necessary) standing on the opposite side from the administrator and holding the horns or ears, almost any animal may be secured while getting medicine. With very strong or turbulent animals, such as bulls, or in phrenetic diseases, where much excitement exists, additional measures may become necessary. In such cases an additional power may be obtained by means of a strong soft rope fastened round the cervix of the lower jaw, and the ends held by an assistant on each side; or, as a last resort, in preference to casting the animal, a ring or nose-piece may be had recourse to. By nose-piece, I mean an iron instrument now pretty common in the country under various names, but exceedingly useful for securing bulls or other refractory animals. It is made something in the form of a horse-shoer's pincers, with a knob at the extremity of each blade, and a slip secured with a spring or screw to keep the blades together. By means of this a much firmer hold is obtained than by the hand, and at the same time the respiratory action of the nostrils much less interfered with. But before adopting any of these desperate measures, it is at all times advisable to have the assistance of well-qualified parties to apply them.

No attempt should be made (as I have sometimes seen done by thoughtless individuals) to fasten the head up to rings, posts, or

joists, as by doing so they are precluded the relief afforded by getting down the head and coughing, in case of an accident occurring. Nor is there any use in the pinching and thumbing of the throat, which many would-be-skilful persons practise. If an animal obstinately retain a portion of the drench in its mouth, the only manipulation that will cause it to swallow, is to produce motion of the lower jaw and tongue, which will be done best by putting the fingers into the angle of the mouth and causing it to chew, or by pressing or rubbing gently upon the base of the tongue, between the lower jaws.

By attending to the simple indications of Nature which I have above mentioned, namely, to elevate the head as little as possible, to keep the respiratory functions of the nostrils free, and the motions of the jaws and tongue at liberty, very seldom indeed will attempts to cough be made, or chance of choking occur: when it does, the animal's head should be immediately set at liberty, and a short time allowed for the parts to recover themselves, before the operation be again commenced; and where any such appearance of irritation has once shewn itself, great additional caution is necessary in carrying on the administration.

When accidents do occur, and through mistake or mismanagement a quantity of any foreign matter finds its way into the air-passages, the subsequent treatment advisable will vary considerably, according to the symptoms which manifest themselves. A good deal of what might have been said on this point has already been anticipated by the cases reported at the commencement of the present paper; and I shall make a few more remarks on it in going over the different pathological conditions which may result from such a cause.

The first result to be spoken of as likely to arise from a portion of foreign matter being carried into the lungs is asphyxia, more or less complete, according to the quantity which may get into the bronchial tubes on such an accident. It was this, I believe, that produced the sudden death of the two-year old quey at K——, mentioned in Case II; and also that of the calf that died the first of the five at S——, in Case IV. And in conversation with some of the more intelligent of the farmers, I have had a number of similar cases mentioned to me, in which the animals shewed evident symptoms of choking while getting medicine, and almost instantly dropped down and died. It is evident that in all such, there must have been an entire exclusion of the air from the lungs, and death produced as in drowning, hanging, &c., in consequence of the non-decarbonization of the blood. A result so speedily fatal as this is only likely to occur in cases previously weakened by disease, especially of a typhoid or putrid nature, in which the

nervous influence is seriously impaired. In such we often find the fine sensibility which ought to preside over the function of deglutition almost entirely gone, and the animal devoid of any voluntary power in swallowing; so that fluids recklessly poured over the throat will as likely proceed along the trachea as the œsophagus. In addition to this, an animal so weakened is less able to resist a strong and heedless operator, and also less able to make a powerful expulsive effort for its own relief. As confirmatory of this it may be mentioned, that in the two cases last spoken of, where death followed almost immediately after the administration of the medicine, both the animals were labouring under pre-existing disease of a low putrid form, both presented on post-mortem examination all the appearances of having died asphyxiated, and both had a large amount of foreign fluid matter in the air-passages. With regard to the treatment of such cases, all attempts at it would, I believe, be vain. The only useful thing to be done, is to let out the blood, and try to save the skin and carcass, if of any value.

The chance of asphyxia supervening upon the introduction of fluid matter into the air-passages is succeeded by, or perhaps complicated with, a tendency to syncope or fainting. This condition is probably produced by the penetration of globules of air into the vascular system, from portions of emphysematous lung. It has been found in a number of cases in the human subject after death from syncope, that emphysema of the lungs was accompanied by globules of air in the arterial vessels of the brain, death having, without doubt, arisen from that cause (see a paper on pulmonary emphysema by Dr. Piedagual, read before the Academy of Medicine, Paris, September 9, 1845); and we are familiarly acquainted with similar effects being produced on the horse when the knacker, in order to destroy him, blows air into an open vein. The same condition, though from a different cause, will occur in the case of an obstruction of fluid matter in the bronchial tubes. This, at the same time that it excludes the air and induces asphyxia, will confine within the bronchi and air-cells a portion of impure air, which will necessarily seek to become extravasated into the least resisting tissue with which it is in contact; and there is little reason to doubt a portion of it will find its way into the ramifications of the pulmonary veins, from whence it will soon reach the nervous centres, and produce syncope. I have no doubt but this was the case with one of the calves at S——, Case IV, which fainted and died immediately after being bled. I cannot on any other grounds account for the event, as the quantity of blood drawn was so small as to preclude the idea of its having died from the actual loss, although that loss might have had the most prejudicial effect on an animal previously at the verge of fainting. It

was the fear of the supervening inflammatory attack that induced me to bleed in this case; but the consequences were such, that I should hardly feel myself justified in doing it again under similar circumstances; for I think there is no doubt, that in the commencement of such a case, the most vigorous stimulant treatment might be had recourse to with advantage, leaving the antiphlogistic measures to the fuller development of the inflammatory stage. Be this as it may, the fact was, that the animal, which was nine or ten months old, and perhaps nearly twenty stones weight, fainted without recovery, after the loss of less than an imperial pint of blood, a quantity which would not have affected a calf of three weeks old. And the evident conclusion from this, I think, is, that some pre-existing tendency to fainting had been established in the vascular system previous to the operation. I regretted much that, owing to the circumstances under which I had to make the post-mortem examination, it was not in my power to dissect the arterial system of the brain and spinal cord with sufficient care to ascertain whether there were air-globules in them or not.

A third set of symptoms liable to arise from attempts at choking with fluids, and one less likely to be connected with the true cause than either of the above, is emphysema of the sub-cutaneous cellular tissue, shewing itself by the skin over the entire upper part of the body and neck being puffed up like a bladder. This occurred in two of the cases I have reported, Nos. 1 and 3—in the latter to a very alarming extent; and I have no doubt arose from a rupture of some part of the bronchial ramifications, at the instant when the animal made a powerful expiratory effort to relieve itself. Such an accident would be immediately followed by an escape of air into the cavity of the chest, which would by-and-by become extravasated through the moist serous lining and muscular parts, and diffuse itself as a puffy crepitating swelling under the skin. Pathological writers speak of this as a pretty constant accompaniment of such a state of parts in the human subject.

With regard to the treatment of such emphysema, I have little to add to what has been already stated in noticing Case III. When it occurs to a considerable extent, there must, of necessity, be much constitutional derangement, which will have to be overcome by a stimulant and restorative system of treatment, at the same time that means must be had recourse to for the escape of the air as speedily as possible. For this purpose, I found the insertion of a number of small tape setons under the skin to be the most effectual. Mere puncturing with the lancet I found to have little effect, in consequence of the speedy re-union of the divided edges of the skin; and large setons would be productive of too much irritation.

The fourth and last consequence to which I shall advert is one of more uniform occurrence than any of the fore-mentioned—one, in fact, which will always occur from the presence of foreign matter in the air-passages, provided the patient is not carried off by the more sudden termination of asphyxia or syncope. It is inflammation of the mucous lining of the air-passages, it may be of the larynx, the trachea, or the ramifications of the bronchial tubes, accompanied by congestion of the pulmonary tissue itself. In four of the cases I have narrated, this appeared to be the simple uncomplicated result; while in the other two it was accompanied with emphysema.

The treatment of the simple inflammatory affection seems apparently plain, being the ordinary means for subduing such, namely, bleeding, sedative medicines, and counter irritation. In as far, however, as experience leads me to form an opinion, I would say that in most cases bleeding is but of very doubtful propriety, unless the inflammatory action run very high, and the patient be strong and vigorous. My objections to blood-letting in this case are, first, that the inflammation being the result of an accident, and not a consequence of any previous plethoric state calling for depletion, the animal is, consequently, less able to bear it; and, second, that when a large amount of blood has been withdrawn, there is greater difficulty in establishing the full and free expectoration which is needful to carry off from the air-passages the fluids secreted into them. I therefore consider it safer treatment to control the febrile action by sedative medicines, and even this not to be carried too far—to be, in fact, immediately changed for a tonic system as soon as free expectoration is established. It is, however, to external counter-irritation that I am most inclined to trust for relieving the bronchial inflammation arising from this case. In every case where I saw it fairly tried it had the happiest effects, the animal seemingly being relieved in its respiration as soon as the action of the blister was fully developed. In Cases I, III, and V, this was well shewn, and I have no doubt would have been equally so in the three longest lived cases at S——, had the wrong-headedness of the farm manager allowed it to be adopted. Along with external irritation I would advise steaming of the air-passages by means of any kind of hot moist substance placed below the nose or hung upon the head: this has often a powerful effect in promoting a free secretion from the mucous membrane.

The above effects resulting from the improper administration of medicine, especially the three first-named, viz. asphyxia, syncope, and emphysema, I have endeavoured to point out the more plainly, because I do not recollect to have seen either of them mentioned by any of our veterinary authorities as occurring from such a

cause. That they do occur, however, the details of the foregoing cases bear evidence, and I have no doubt the recollection of every intelligent veterinarian will furnish him with sufficiently painful proofs to the same effect. It is well, therefore, that the members of the profession be prepared for such cases when they happen; not only that the mis-management of others may not be laid to their own charge, but also that they may be able to afford a ready solution of cases apparently so mysterious, and point out the proper means of treatment. I trust, therefore, that what I have stated will be candidly weighed by my veterinary brethren, into whose hands this may fall; and if in any point my views be wrong, they will, I trust, be speedily put right; while, if found correct, they will as speedily be authenticated by the experience of others. The treatment of domestic animals during disease has in most quarters been too long an affair of pretension and mystification in the hands of ignorant quacks and empirics, and it is time that a better order of things were coming round. This, however, can only be effected by those who are making the study of disease the labour of their lives coming frankly forward at every fitting emergency, and endeavouring to sift out the grains of truth from the chaff of error which interest or ignorance may attempt to throw over them; and shewing, in a practical manner, that the good of the agriculturist and the veterinary surgeon are one and the same; namely, the successful treatment of all the ills of domestic animals.

I shall now, in conclusion, offer a few remarks on the statistical import of the above cases, and have done.

If we were warranted to take the nine animals whose cases I have given above as data sufficient whereon to base a calculation, it would appear that the quality of the drench has less to do with the production of the accident than has the manner of administration, but that it has a great deal to do with the after-consequences. Of three of these cases one got only linseed oil, and two simple water-gruel, with nothing more irritating in it than a little common salt; and although these were apparently at the first as ill as most of the others (two of them, in fact, worse), yet they all came round. The other six had purgative medicine, which, of course, is irritant, and of which powdered ginger formed a part, and these were all fatal. But in all the cases, as far as I could get at the truth of the matter, the animals were held by the nostrils during the administration, the operator being unaware of the danger, and, of course, neglecting, unless in one of the cases, the precaution of letting go the head when coughing commenced. It may also be noticed that, in the three cases which recovered, prompt and remedial treatment was had recourse to, which was not in any of those that died.

In applying these results to a supposed case—but one not in the least unlikely to happen, of an insured animal having medicine improperly administered and dying thereafter—without entering into the minutæ of the question, I would state one or two points which appear to me to have a bearing thereon. In the first place, the case seems altogether against the owner of the animal, if it was in ordinary health when the administration took place—or, although affected with disease, if it was not of a serious nature, or one which often produces death—or if, affected with serious disease, the owner took upon him to treat it without seeking the advice of a regularly qualified person—or if death occurred suddenly after the administration, the other appearances of disease not being very marked—or, lastly, if proper remedial treatment was neglected. On the other hand, the case seems favourable to the owner, if serious disease existed before the medicine was given—if he was acting on the advice of a regular practitioner, even although absent at the time—if due care and caution were exercised in the administration—and, lastly, if a candid statement is given of what has happened, and the treatment proper to the case adopted. Of course, there will be modifying circumstances attending each individual case, which can only be discussed on its own special merits; but it will be of service to the veterinary surgeon to be intimate with the main bearings of the subject, which is the reason that has induced me to bring it under discussion. It seems also to me to be of vast importance to the interest of veterinary science, that, in all cases connected with cattle insurance, correct returns be given, so far as circumstances enable a judgment to be formed, of the true cause of death; for it will be allowed by all who think on the subject, that nothing is more wanted by the profession than sound statistical information, and no means seem so well qualified to afford this as the cattle insurance companies, provided accurate returns are made to them. I hope, therefore, that what I have said may be useful to some, both of the owners of cattle, and of those who have their diseases to treat; and that the subject will soon be taken up by others, whose experience and ability will render their opinions of greater weight than mine, whether coinciding with or subverting those which I have in this paper recorded on the subject.

ON MYÖITIS.

By ARTHUR CHERRY, *M.R.C.V.S.*

“ But many things have prevented me from taking the most fertile element. The entirely abstract education that is given us hardened me for a long time. It took many long years to efface the sophist that had been created within me. I came to myself only by shaking off that foreign accessory ; I have learned to know myself only by negative means.”—MICHELET.

THE late Professor Coleman taught that “ animals were subject but to few diseases,” and used also to dilate upon what he considered to be a fact, that “ in a natural or undomesticated state disease did not exist ;” that the maladies to which “ flesh is heir” were the result of being under the dominion of man. Those who knew the talented Professor will bear me out in saying, that his easy diction and persuasive eloquence were well calculated to carry with him the opinions and feelings of men, even upon a subject based in error ; and the consequence naturally ensued, that during the Professor’s life but very few of his dicta were questioned, and, in all probability, years will yet have to elapse before the erroneousness of many of his opinions will be overcome. Like all others who listened to his teaching, I was in early life smitten with the Professor’s views on both the dogmas that I have stated, and so implicitly believed the dicta, that, in spite of every fact to the contrary, I considered my observations were wrong, not that the dicta were fallacious. I shall now, however, confine myself to remarks on the first ; viz. the small number of distinct diseases to which animals are liable.

When more close examination and longer inquiry kept reiterating the same results, conviction that I had been pursuing a “ will o’ th’ wisp,” at last was forced on me ; and, on summing up the results of my observation, I found that my nosology, as regarded variety of disease, was more than doubled, and many vistas were opening to view through the dim obscurity that promised to add still very largely to the number : some of these have since proved that the shadows were cast by bodies having substance, and not the mere shadows of the imagination ; others are still being explored, and will, doubtless, yield a return to the inquirer.

I have somewhere read, as an opinion of very high authority, that our universities, though indisputably the very *foci* of learning, have *spoiled* more *men* than they have *made* : as a motto I have quoted from M. Michelet to the same purport ; for whatever may be the school, i. e. the training, to which the bulk of men are subjected, so will they continue through life—“ the child is the father

of the man :” hence, wherever erroneous doctrines have been extensively taught, it will take very much time to remove them and replace them by others of a better character. For example, half a century since, and all, gentle as well as simple, referred the seat of every doubtful case of lameness in the fore limb of a horse to the *shoulder* ; and though it is not so now in and around the metropolis or with the reading public, yet in the remoter districts it is but little diminished. Now-a-day, the seat of every doubtful lameness in the fore limb is the *foot* ; thus going from one extreme to the other. This brings to my recollection a remark of Martin Luther, the reformer, who compared the minds of men “ to a drunken man on horseback, who, when he rolled to the one side, in the endeavour to sit upright rolled over to the other,” never being able to hit the happy mean. Thus fashion or custom has reeled from “ shoulder ” to “ foot ”—(the ordinary proportion of the occurrence of disease in each has never, as far as I know, been fairly inquired into); and, strange to say, the important parts situate between these two extreme points have been left almost entirely out of the inquiry. The happy mean has never been attained.

I do not mean to assert that the foot is not the frequent seat of morbid action ; neither do I for an instant seek to throw disparagement on the labours of those who have investigated the diseases and maladies of the foot ; on the other hand, I should be ready to support, if it were requisite ; but what I complain of is, that every thing is in extreme, and other parts, which may be and are frequently the seat of morbid action, are unattended to.

Now, a great error is constantly being committed : a malady is spoken of as of rare occurrence, and immediately it ceases to attract notice ; yet, in truth, it is more requisite to inquire into rarities than commonalities, because the latter are sure to be well known from their frequency ; but the former must be borne in mind, and in mind only ; for though it may not happen once in a thousand cases, who can say which number in the thousand will be the exception ? It is the knowledge of specialities which constitutes the difference between the skilful or scientific and common routine practitioner, whether it be in law or medicine ; and we must not forget the axiom, that every symptom has a cause, and that every cause has its appropriate symptom.

The symptoms are the alphabet of the science, and the union of symptoms constitutes disease ; but sometimes, though rarely, a single symptom will indicate a disease.

Now, all that can be taught in the schools are the symptoms or alphabet, and their combinations into diseases, or orthography. The causes, or syntax, and the rudiments of therapeutics, which

may be likened to prosody : the full understanding of the latter can alone be learnt by practical observation ; and this will be greatly regulated by the amount of rudimental knowledge ; therefore, the more carefully the symptoms, diseases, and their causes are taught, so in proportion will be the capability of the scholar to enter into the investigation and treatment of the higher and more necessary departments.

I have been led into this digression from reflecting on the many points in pathological science which are totally unheeded ; and where we ought to look for the greatest assistance in investigation, we find the very reverse. Only imagine a learned (?) teacher, to an inquiry in a court of law, stating that the symptoms of navicular disease were "*conjectural*." It may be an abstract fact, and so also, upon the same view, is every disease that does not shew itself upon the surface ; and how few these are every one can answer ; nevertheless, *we can* and *do* daily, nay hourly, speak positively as to the nature and seat of disease from these "*conjectural*" symptoms, without in any way fearing to be found in the wrong : and weak indeed must be the position of our art as a science, if, after all our labour, we are no better off than being mere "conjectors," or "guessers." Now I, for one, maintain that we either do know or we do not know : if the first, we ought to be able to describe intelligibly ; if in the second position, we ought at once to say so : there is less disgrace in confessing ignorance than in attempting to display knowledge which we do not possess.

I could cite many instances in which the strangest jumble that can be imagined exists between causes and effects—the one put for the other, and changing about like so many puppets. Now this arises from want of a proper groundwork of rudiments more than from any thing else.

But I am wandering from my object, which is to draw attention to a state or condition of certain constituent parts of the body, which, except in an aggravated form, have not been investigated, the more especially at that period when easiest of removal or mitigation. The affection to which I allude I shall term "*myöitis*," or disease of the muscles, as a general term.

Muscular fibre has been considered so little prone to morbid action, that it is one of the component parts of the body considered as almost exempt from disease : not so, however, does it turn out upon investigation ; but, on the contrary, several very severe and often fatal forms exist. That affection of the diaphragm produced after severe exertion, frequently called "palpitation of the heart,"—and almost always fatal in its termination—is a marked instance. The most painfully severe and fatal case I ever witnessed was one in which the whole of the voluntary muscles of the body were af-

fectured ; a state, I have no doubt, which has often been confounded with tetanus, a disease quite distinct. These belong to the acutest form ; but the most general and the least known are the chronic or subacute conditions : one form of stringhalt is an instance, and I am strongly disposed to believe that, properly speaking, broken wind also belongs to this disease ; but the one the most frequently occurring is the affection of the fore limb, and this generally of the flexor muscles. This disease of the fore limb has been generally called *contraction of the tendons*, and as such it has been treated. It was for this malady that *tenotomy* was devised ; and, if I do not err, it was introduced into this country more than twenty years ago by Professor Dick ; but, from some remarks of Professor Dick's, with which I have been but recently acquainted, if I do not misconceive the tendency of the statement, the Professor's views are, that the cause of the shortening of the flexors arises from the contraction of a band of the aponeurosis, or of a ligamentous expansion just above the knee-joint : at least, I so understand the description, for it is not very clearly expressed ; but whether I understand correctly or not, I am not going to dispute the soundness of the Professor's view ; all I can say is, that I have not observed such a state or condition of parts ; but I am, at the same time, totally unable to say that it does not exist. What I mean is an affection of the *muscular fibres* of the flexors of the fore limb, which may consist of morbid shortening or contraction, or of the reverse, a deficiency of contractile power : the first form is most commonly to be met with.

Tendon in itself is inelastic, and though it may be thickened, enlarged, or otherwise altered in structure, I have never been able clearly to ascertain that morbid contraction has taken place : I, of course, except those cases of direct injury from accidents : neither, on the contrary, have I been able to demonstrate abnormal *elongation*, except in a few rare instances where the fibres themselves have been lacerated (the suspensory ligament is a different structure, and therefore does not here come under consideration).

We are all of us too prone to be satisfied by outward appearances, and thereby frequently mistake that for a cause which, in reality, is a result ; and hence arrive at conclusions at variance with the truth, and are surprised to find that oftentimes our best laid plans for a curative treatment are of no avail. Had it not been for the experience derived from failures, I should never have been led to inquire into the minutiae of obscure diseases and lamenesses ; and, thus driven to it, the causes of failure too often shewed themselves to have arisen from my own want of perspicuity in diagnosis.

I have before animadverted on the impolicy of taking an out-

ward appearance as a sure test of the seat of disease; for though it is true that a part once injured is, *cæteris paribus*, more prone to take on morbid action than if it had not previously been affected, yet it does not follow that it may not escape, and some other part be diseased; for it is not by any means an unfrequent occurrence, that two parts may be simultaneously injured: as, for example, a horse may cut or bruise his foot and spring the suspensory ligament at one and the same moment—two diseases entirely distinct from each other; or he may spring the suspensory ligament and wrench the hock, so as to terminate in spavin; indeed, the combinations of this kind are but too common.

Again, we are too apt to consider every thickening of the back of the leg as an affection of the *sineus*. Now every thickening of the back of the leg is not an affection of the tendons. Examine more closely into some of these cases, and you will find that the true tendons, the perforans and perforatus, are from knee to fetlock, when strained tight by the animal being made to stand on the leg under examination, clearly to be distinguished by the hand and fingers, beneath and through this existing thickening; and if traced carefully, not a symptom of irregular surface or of abnormal density of fibre is to be detected; while, on the other hand, in some cases the change of structure is clearly and only referrible to the tendons themselves. Now here are two distinct forms of disease: the first we endeavour to connect with our ideas of the affections of sinew by calling it a case of “thickened sheath of the tendons;” while, in truth, it is not a disease of tendinous structure at all, but of cellular tissue, sometimes the result of an injury, or done by a single journey, but most generally the result of long-continued and repeated exertion when the parts are unfitted for it. Occasionally we hear of “gummy legs,” and which, though any thing but a euphonious term, is rather expressive; but I have never heard any interpretation of the term, but “thickened sheath of the tendons.” Now I must confess that I have for many years looked upon this “gummy leg” as different from, and produced by causes rather dissimilar to, those of diseased tendons; and, further, a state very often accompanying and secondary in importance to some other disease.

Again, if we look at the ordinary relation of tendon to muscle, we shall find that the power of the one is equal to the endurance of the other; but we sometimes find that the one is rather in excess over the other: this may arise from a natural defect, or be produced, in some measure, by the artificial state in which either the one or the other may be placed.

The most general effect of derangement of function, or disease

in a muscle, is to produce a rigidity or contraction of its fibres ; that is to say, it is incapable of elongation to its full and natural extent ; and as this change is one of gradual production, its true nature is unheeded : but another and opposite effect is also to be found—the state of *flaccidity* in which the contractile power is in a degree lost : this, a seeming paradox, is nevertheless true, and is, after all, but one other instance to shew that opposite extremes may be produced by one and the same exciting cause.

Let us take for comparison two cases, common enough, and without any enlargement or thickening of the leg ; but simply, the one with the leg straight, the fetlock joint rather thrown forwards, the other with the leg bent forwards, projecting at the knee, and the pasterns thrown back. I have said that neither of these cases shall shew any of the ordinary forms of disease below the knee ; yet both shall be unsound, not limping with one leg, but lame of both : take the the first ; commence at the fetlock, the tendons are tense, firm, and have a metallic-like feel ; but their superficies particularly well-defined, the suspensory-ligament less tense than usual, the knee straight, the arm hard and the muscles well-defined, especially the flexors ; but look closer, and you will perceive that the bodies of these muscles are shorter, the tendons appear to be given off higher up the arm than usual, and the leg has just the appearance which the limb assumes at that period after a death-blow, when the whole of the muscular fibres of the body contract with the last efforts of expiring life. Now take the second condition : instead of the leg appearing as if it were shortened by the violent effort of the flexor muscles, it looks as if it would become longer if the bones would admit of it, just as a long man doubles himself to be able to lie down on a short bed ; the fetlock is thrown back, the knee thrown forwards, the suspensory ligament is tenser than the tendons, which are flabby, the muscles of the arm are in the same condition, and, if you look closer, it will be seen that the tendons appear as if given off unusually low down the arm ; and hence it is often said of such horses, that the leg has no right to have gone in such a way, for what a *good arm* there is, and this appearance also applies very generally to the leg. But let us proceed a little farther in our investigation, and give each of these horses a brisk trot for a few minutes ; get them, as the jockeys say, “ warm,” and then these appearances are greatly removed : sometimes they will for a few minutes disappear ; in the first, the contracted fibres are relaxed—in the second, the relaxed fibres are, by the stimulus of exertion, brought more into action—simply the result of stimuli : let them stand till this has subsided, and the pristine condition returns.

I will here pause to give an answer to a question which has been repeatedly put to me, Why horses foaled with knees arching forward are always *safe goers*; for it is a notorious fact: it is simply the greater natural length of the muscles of the fore-arm than of the bones of the leg; and hence there is an unusually increased degree of muscular power; for I never yet saw such a leg that was small and mean in any of its proportions as regarded circular admeasurement.

[To be continued.]

EPILEPSY IN A COW.

By W. A. CARTWRIGHT, *M.R.C.V.S., Whitchurch, Salop.*

May 13th, 1847.—I was called in, 2 P.M., to attend a cow, seven years old, belonging to Mr. Hales, of Marbury.

Last night, while milking her, she was observed to blink her eyes and contract the muscles of her head and neck spasmodically, but she gave her usual quantity of milk. This morning she was found to be very ill, but the owner thought she only had the belly-ache, and did nothing to her.

Symptoms.—She is lying down in the back part of the cow-house, closing her eyes spasmodically, and when doing so her head is suddenly twitched up and down, first to one side, then to the other. I attempted to drive her up, but she tried several times, and could only partially raise herself. At length, however, she managed to do so, and we drove her out into the yard, towards a loose box, but when out she sank quietly down upon the pavement. Soon afterwards she got up again, and reached the box. The pulse now was very quick and bounding. As I did not doubt the disease lay in the head and spine, I took about six quarts of blood; blistered the back of the head and along the spine; gave purgative medicine, and ordered a restricted diet, and quietude.

14th.—11 A.M. She is better, but still has great difficulty in rising. When down, she throws at times her head about, and struggles, and breathes short. The spasmodic action of the eyelids and neck still continues, but not so often. Abstract four quarts of more blood, and repeat the blisters, the last not having taken much effect. Also give some fever medicine, and keep her quiet.

15th.—Better, but still very ill: leave her alone until to-morrow.

16th.—This morning I found her standing up, and great improvement had taken place in her state. In the course of the night

she had pulled out a quantity of corn in the straw from the adjoining bay, and is now chewing her cud. There is now scarcely any of the spasmodic action going on about the head and neck, and she can get up and walk about much better. Bowels well opened, and she looks lively. Pulse full, but too quick; I therefore took away, to make sure, two quarts of more blood.

From this time she gradually got better, and in a week after she was turned out into the stock, and has not up to the present time (July 16th) had any relapse.

MEGRIMS AND GUTTA SERENA IN A HORSE.

By the same.

MR. GREEN, of the Victoria Inn, in this town, had a horse that he disposed of this year, which was twenty-seven years old. He was of good "pluck" and of the Irish breed, and when going on the road he carried his head very high up.

One day, on the owner going to the field to see him, he found the animal was perfectly blind. He had guttâ serena in each eye. Up to this time he had never been unwell, or had any attack of inflammation in his eyes or of megrims; nor was there now, except his blindness, any thing amiss with him, since he walked about and fed as usual. Some days after this, they were taking him down the street to fetch some water, when he experienced, for the first time, a very severe attack of megrims, of which he recovered. Fearful of having him out or allowing his children to drive him, he sold him; and he was informed, some time afterwards, that the horse died from a subsequent similar attack.

What I want to observe, by relating this case, is, that he became amaurotic *without ever having had any apparent attack of inflammation in his eyes or of the brain.*

A CASE OF INTUS-SUSCEPTION, WITH FLESHY POLYPI, IN THE DUODENUM OF A MARE, SUCCEEDED BY RUPTURE OF THE STOMACH.

By Mr. BANNISTER, Battle.

THE history of the case is as follows:—During the past year I was called in many times to attend this animal, which shewed symptoms of flatulent and griping pains in the bowels, sometimes

twice in one week; at other times she would work well for two months, and appear quite healthy. In some of the attacks the bowels were constipated, at other times not. If she manifested very distressing pains, I used to employ depletion, and exhibit mild aperient medicines in combination with sprts. æther nitros., which would sometimes relieve her in two, three, or four hours; at other times twelve hours would elapse before any relief could be obtained, which obliged me to give medicines of a more powerful nature. The last attack was about the 1st of June, when, after rolling about for twenty-four hours, she appeared quite easy, and her bowels worked well. Two days afterwards she was taken with influenza, from which she recovered; and on the 12th inst. I left orders for her to go to work on the 14th; but on the 13th I was sent for in great haste, the mare having been taken much worse. Before my arrival, however, she had died.

Post-mortem Examination.—I first disclosed a great quantity of ingesta extravasated into the cavity of the abdomen, which I soon ascertained proceeded from a very extensive rupture of the pyloric portion of the stomach, all the coats of which proved lacerated to the same extent. From the quantity of ingesta, I should suppose the organ to have been very full at the time of bursting.

The next thing discovered was an intus-susception of the duodenum, of about two inches, which had caused a considerable thickening of the coats of that intestine; contiguous to which was a number of pendulous tumours, which, upon laying open the gut, I found attached to the mucous membrane. Some of them were as large as a pullet's egg, others about the size of a small bean, a specimen of which I have forwarded to the Royal Veterinary College. The intus-susception was doubtless caused by a sort of dragging action on the coats of the intestine.

Professor Spooner very kindly obliged me with his opinion of the case, in which he states the pendulous tumours sent are what may be termed *fleshy polypi*. He states he has previously seen similar specimens of disease in the horse, though it is by no means common; and has hitherto been quite unable to give a satisfactory explanation as to the cause in operation in giving rise to these very singular abnormal productions.

July 15, 1847.

R E V I E W.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HOR.

THE LAW CONCERNING HORSES, RACING, WAGERS, AND GAMING ; *with an Appendix containing recent Cases, Statutes, &c.*
By GEO. HEWITT OLIPHANT. B.A., Esq., of the Inner Temple,
Barrister at Law. Small 8vo, pp. 322. Sweet, Chancery-lane,
London, 1847.

PROFESSORS of veterinary medicine in Britain would be loath to admit that, either in the knowledge or practice of their art, they were behind veterinarians of foreign countries ; and yet there is one branch of their science which, nearly and dearly as it concerns them, has been by them grossly neglected, and that is VETERINARY JURISPRUDENCE. Lectures we have heard none on the subject ; treatises we have none. Theses and parts of works on general subjects have indeed, from time to time, been penned by some of our professional brethren on that vexatious question, *soundness*, but nothing has been produced in the shape of a system of jurisprudence : on the contrary, every veterinary practitioner has been left to form his own private code of laws of what does or what does not constitute soundness, and hence, to our continual discredit, have gone forth to the world the most wild and contradictory opinions. It is, therefore, with feelings of pleasure that we hail the appearance of such a work as the one before us, calculated, as it appears, to lay the first stone of a new edifice in the veterinary world, and of one which we are most anxious to see completed.

The moment medicine becomes amenable to law, such an amalgamation of the two sciences takes place, that no advocate, or even medical evidence, can be said to be prepared for his duty, unless he possess a knowledge, to the required extent, of both : hence the need in horse causes of veterinary jurisprudence, to the lawyer as well as to the veterinarian. When law, however, is called forth to settle medical matters—be they human or be they veterinary—unless it suffer itself in its proceedings to be guided by medicine, it will be apt to go astray ; or rather, perhaps, the two sciences will advance with firmest and surest step, hand in hand, linked in reciprocity, of attachment, aiding and supporting each other : hence has it turned out that the most prized works we possess on the subject of medical jurisprudence have emanated from

the combined talent of men of both the legal and medical professions. Imagine a learned judge rising from the bench, and telling the jury that it was the *cost* or *price* of the horse that ought to decide the question of his soundness; or a veterinary professor in the witness-box saying that *all and every alteration of structure constituted unsoundness!* How lamentably does this shew the want of a system of veterinary jurisprudence; how much it tells for—that which ought not to be—"the glorious uncertainty of the law!"

Horse-dealing and racing, and gambling transactions connected therewith, have of late years proved rather fruitful sources of emolument to the gentlemen of the law; horses being, for the most part, chattels of that value, and the buyers and sellers of them persons in general of that property that can well afford to pay for litigation; to which indeed the latter—for that very reason perhaps—seem somewhat more disposed than other classes of people. Were a horse a fixed body, unchanging and unchangeable, the same as the saddle he bears upon his back, or the bridle by which he is guided, or any other article of man's make, then indeed might he be bought and sold with the same certainty and good faith with which manufactured property exchanges owners; but being, as he is, a vital organism of too complex a structure to be thoroughly comprehended, even by those who study it most, and over which those who profess to understand it best have but an indirect control, is it a matter of surprise that what is in order to-day should be out of order to-morrow? or to be wondered at that we should so often be found disputing concerning whether it be or be not in order, and what the nature of such disorder is when admitted to be present? In his dealings in horses, as in every thing else, the man of means is ever running after a sound and perfect animal, forgetting that perfection in horseflesh is no more to be had, ready-made to his hand, than perfection in his own or any other animal kind. Behold what difficulty the artist labours under at the time he is seeking about for a *model of a man* for imitation with his brush or chisel! The regiments of grenadiers can furnish him with tall, *fine-looking* men, but not one in twenty or even fifty of them will be found to come up to his ideal standard of perfection. Or, let a medical man have to "pass" men as effective for any service or force, and how few will he find free from defect or blemish, though many of the imperfections be such as may not deteriorate from their efficiency! Exactly so it is with horses. Taking the word *sound* to imply perfection or freedom from all defect and blemish, how very few horses after they have been any time in use, supposing even they were sound originally, will bear the test of examination and trial!

We attach the greatest importance to this point, *soundness*,

because upon it must necessarily be based the entire superstructure, of one department at least, of veterinary jurisprudence. Unless the question of soundness be satisfactorily set at rest, how can the "law of contracts" in buying and selling horses be equitably adjusted? That which veterinarians have neglected or been unable to do for themselves, we should apprehend judges and juries will fail, as they ever have failed, in attempting to do for them; and it is under this great disadvantage that Mr. Oliphant has found himself forced to write on such subjects as *soundness* and *unsoundness*, *warranty*, &c. He has however done so, and he has accomplished his object in the best manner we could under the circumstances expect. He has summoned to his aid our best veterinary authority, Youatt; and he has presented us with a most comprehensive and useful digest of cases of reference, among which we may find parallels to almost any thing of the kind that may occur in future. Still, the question of soundness remains substantially unsettled, and we are to blame for it. The law has made every provision law could make on a question those who ought to have long ago settled the point continue so much at fault; and Mr. Oliphant has judiciously arranged and digested what has been done; and so, as far as the law of soundness and warranty is concerned—the "law of contract," as its legal denomination is—the matter stands, and we are afraid is likely to stand, *in statu quo*.

"The object of the present treatise is to lay before the (legal?) profession and the public, in as short and convenient a form as possible, the law of contracts concerning horses, whether it be in buying, selling, hiring, or in any other manner dealing with them; to ascertain the liabilities incurred by parties either on 'the road,' through negligent driving, or in 'the field,' by riding over the lands of another; also to explain the present state of the law with regard to racing, wagers, and gaming, in connection with the recent alterations effected by the Act of Victoria. In the Appendix will be found some very late cases, a few important statutes, and some information which may be found useful for general reference."—*Preface*.

The following may prove useful hints to such of our readers as make it their business or pleasure to traffic in horses:—

"The best rule for a man to follow in selling a horse is this:—Where the horse is of no great value, to refuse warranty altogether, and such a horse is best sold by auction. Where the horse is of great value, if sound, but that appears doubtful, then to let the purchaser be satisfied by a veterinary examination, and to take the responsibility upon himself. Where, however, the seller is confident that the horse is perfectly sound, and that with a warranty he would fetch a much larger price than without one, he

should have him examined and certified as sound, &c. by one or two veterinary surgeons of respectability and experience, and then, knowing on what grounds he goes, he may take the risk of warranting him sound."—*Introduction*, p. xxxvii.

In former times "shaking of hands was held necessary to bind a bargain;" and though it continues to be "very much practised in the north of England at the present day, both in horse-dealing and other transactions,"—"it certainly does not bind the bargain where the horse is worth £10 or upwards."—*Chap. i*, p. 2.

"To make the sale of a horse at £10 or upwards valid under the statute, the buyer must either actually accept or receive it, 'or give something in earnest to bind the bargain, or something in part of payment; or the parties to be charged must either themselves or by their agents make and sign some note or memorandum in writing of the bargain.'"—*Chap. i*, p. 4.

Chapter II treats of "the rule of law" of "Fairs and Markets overt, the Recovery of Stolen Horses, and the Law of Auctions and Repositories."

And in Chapter III we come to "what Diseases or bad Habits constitute Unsoundness or Vice." After having expressed ourselves in the manner we have on the subject of soundness, it will not be expected we should enter into any lengthened disquisition of it here: at the same time we cannot help shewing how evidently the judges themselves have felt puzzled about the matter.

"Chief Justice Best, in the case of *Best v. Osborne*, held that 'sound' meant *perfect*. In *Kiddell v. Burnard*, Mr. Baron Parke said, the word 'sound' means what it expresses, namely, that the animal is *sound* and free from disease at the time he is warranted. And in the same case Mr. Baron Alderson said, 'The word sound means *sound*; and the only qualification of which it is susceptible arises from the purpose for which the warranty is given.' So that "sound" means *perfect*, and "perfect" means *sound*; and perfection, as we have already shewn, may be said to be as difficult of attainment in horses as it is among men.

Mr. Oliphant has defined a horse to be "sound" *when he is in possession of his natural and constitutional health, and also in such bodily perfection as is consistent with his natural formation.*" There can be no doubt but that a horse answering in his state to this definition must be regarded as sound; we are afraid, however, that, if we exclude, on the score of *unsoundness*, all such as do not answer to it, the catalogue of sound horses will be reduced to inconveniently narrow dimensions.

Did the diseases, defects, vicious or bad habits, &c. constituting unsoundness admit of enumeration or classification, there would, of course, be an end of the affair, so far as they were concerned;

what, however, seems so strange to persons unacquainted with the nature of such matters is, that any one "disease," "defect," "vice," or "bad habit," should at one time be reckoned as *unsoundness*, while at another it is passed over as reconcileable with soundness, or of no consequence. The fact is, that diseases, defects, vices, and bad habits, may each and all of them have existence in almost every conceivable form and degree; and though the line of demarcation between soundness and unsoundness is obvious enough in the more intense or developed forms and degrees, yet, when we come to *incipient* or *convalescent* disease, to *slight* defects, and *doubtful* vices or habits, it will puzzle us all to know where soundness is to end and unsoundness to begin. Mr. Oliphant has taken as his veterinary guide the late Mr. Youatt's opinions as contained in his work "The Horse;" and though we are at a loss to know where he could have gone for better authority, to speak the honest truth, we, for our own part, on this occasion, cannot but feel ashamed of the best. And with this ungracious remark we close our notice of the opprobrious subject—*soundness*.

In respect to WARRANTY, we must bear in mind that "no particular words are necessary to constitute" one: "if a man *says* 'the horse is sound,' that is a warranty; and it is not necessary that the seller should say 'I warrant.'—The general rule laid down by Mr. Justice Bayley is, that *whatever the vendor represents* at the time of sale *is a warranty*. Therefore, if a person at the time of sale say, 'You may depend upon it the horse is perfectly quiet, and free from vice,' it is a warranty." Pp. 64-65.

A very common way of managing such matter is, for the vendor (or auctioneer) to say, "such a horse is perfectly sound or perfectly quiet, but I (or his owner) do not *warrant*." Let us see what Mr. Oliphant says to this:—

"If a person at the time of his selling a horse say, 'I never warrant, but he is sound as far as *I know*,' it is a *qualified* warranty; and an action of *assumpsit* may be maintained upon it by the purchaser, *if it can be proved that the seller KNEW of the UNSOUNDNESS*."

"By the CONDITIONS OF SALE at repositories and public auctions, a specified short time is usually allowed, within which the purchaser must give notice of any breach of warranty: if he neglect to do this, he has no remedy, unless such condition has been rendered inoperative by fraud or artifice. And in a case where warranty was to last till noon of the following day, when the sale was to become complete, Mr. Justice Littledale said, 'the warranty here was as if the vendor had said, *after twenty-four hours I do not warrant*:' such a stipulation is not unreasonable.'" P. 65.

In regard to *parol* and *written* warranty, Mr. Oliphant observes—

"When the whole matter passes in *parol*, all that has passed may sometimes be taken together as forming parcel of the contract, though not always, because matter talked of at the commencement of a bargain may be excluded by the language used at its termination; but if the contract be in the end reduced to *writing*, nothing which is not found in the writing can be considered as a part of the contract."—P. 66.

A great deal more remains to be said on the subject of warranty, which the reader of Mr. Oliphant's excellent digest of the several laws respecting it will find under the headings "warranty," "sale and warranty by an agent," "patent defects," "breach of warranty," &c.: after which comes an exposition of the laws as it affects inn-keepers, farriers, trainers, and stallion-masters, livery-stable keepers, agisters, and the hiring and borrowing horses: this concluding PART I. of the work.

PART II treats of the "WRONGS OCCASIONED BY THE USE OF HORSES;" including "the criminal and civil liabilities incurred through negligent driving, also the rule of the road, and negligent driving by a servant," &c.; with "the privileges and liabilities of parties in hunting over the lands of another."

PART III treats of "RACING, WAGERS, AND GAMING;" comprising "their history, rise, and progress in this country;" "races, stakeholders, and stewards;" "betting;" and "games and gaming-houses;" ending with an APPENDIX of "unreported cases," "statutes," &c.

Such is the comprehensive bill of fare Mr. Oliphant has spread before us. And our only wonder is, when we come to review his "table of contents," how he has contrived to squeeze so much into a small octavo volume of no more than 322 pages; a book a man may carry in his coat-pocket without perceiving he has any thing of magnitude therein. Excellence of arrangement and conciseness of phraseology, no doubt, has done much towards this commendable brevity. At the same time, the author has rendered his digest of horse law equal in information and utility to a voluminous treatise, by the endless references which are, in notes of some half-a-dozen together, set at the foot of almost every page in the book; for which apt and pertinent illustrations Mr. Oliphant must, one would think, have ransacked all the law libraries in the kingdom. No veterinarian will be able to tolerate his library without this book; neither will any turf-man, betting-man, horse-dealer, stable-keeper, or in fact any other description of horse-man, be able to get on in business in the absence of it. And moreover, when the question of *soundness* comes to be settled amongst us veterinarians, which before very long we hope and trust will be the case, the present treatise, we feel no hesitation in saying, by amal-

gamation with some veterinary production of correlative value on the subject of "soundness," cannot fail, as we have foretold at the outset, to become the foundation of a work most pressingly needed by us all, and that is a SYSTEM OF VETERINARY JURISPRUDENCE.

VETERINARY JURISPRUDENCE.

BRADSHAW v. GAFFNEY.

MODERN JUDGMENT OF "HORSE FLESH."—Every reader, who is at all acquainted with the writings of the inimitable Carleton, knows what "switching the primer" means; and we presume that most of them are almost conversant with "Miles Nacopleen," a worthy character in Griffin's beautiful creation, the *Collegians*; but, much as they may know of either the one or the other, we can assure them that a scene occurred at our Quarter Sessions, in this city (Armagh), on Thursday se'nnight, which excelled "Miles," and that the worthy impersonator of that character "switched the primer" equal to any ever witnessed by Carleton himself.

The case was brought for trial before the Assistant-Barrister, and was this:—

Joseph Bradshaw, of Lurgan, sued Francis Gaffney, a horse-dealer, for compensation for loss sustained by the death of a horse, which the former purchased from the latter in Banbridge fair, on the 12th of January last. It appeared that the horse in question had been brought from Ballinagar fair, a distance of upwards of sixty miles, where he had been purchased on the 6th. He was sold to the plaintiff on the 12th, in Banbridge, and died on the 18th—six days after the purchase.

A Mr. Gaffney was called and sworn.—Saw the horse alluded to in Ballinagar fair; had no cough; saw him part of the way home; saw him again in Banbridge fair; was in good health and spirits there; had no appearance of sickness; there is good stabling on the way from Ballinagar to Banbridge; a horse might give a cough occasionally, and yet be sound.

A young man named Day, an itinerant, whose name appears to us to be a burlesque on his intellect (*Night*, he should have been called, if we may judge by his chaotic ideas of the veterinary profession), was next called and examined.—Is a veterinary surgeon; [*Barrister*—"A rose by any other name would smell as sweet!"] served seven months to the profession; does not consider that

it requires longer time to study the science; was never at a college, but has *larnin'* enough; made a *post-mortem* examination of the animal; is of opinion that death was caused by inflammation; is convinced that the causes *were on* at the time of sale.

Our "Miles Nacopleen" (Miles of the ponies) was here ably cross-examined by Mr. Quin, the solicitor for the defendant, and afforded the Court considerable amusement. As it would occupy too much of our space to give insertion to *all* his wondrous knowledge—though he did "switch the primer" that he possessed it—we shall merely content ourselves by informing our readers that he was unable to explain to the Court the nature or effect of inflammation, or to give the meaning of the word *adhesion*, which, he said, existed between the diaphragm and the lungs, "and so sickened the horse's stomach, that he did not eat *three penn'orth* all the time he was in plaintiff's possession." "It was enough," he said, "to kill an elephant."

Mr. Small, of the Armagh Horse Bazaar, being present, was asked by the Court for his opinion of the case. He stated that inflammation of the lungs in the horse ran its course very rapidly, and often terminated fatally in forty-eight hours. The black appearance of the lungs after death, and their being easily torn by the fingers, deceived the inexperienced into the belief that the disease had been of long standing. It was considered by him to be quite possible for the horse to be sound on Tuesday, and die of pleurisy on the following Sunday. If the horse had a cough at the time of sale, and swelling of the glands in the jaw, they were symptoms of catarrh; or if the horse were young, he might be breeding strangles. These appearances would make the animal more susceptible of the disease of which he died. A horse, strictly speaking, could not be considered sound while he had them. The seeds of disease, when discovered, constitute unsoundness. The time that may elapse before a disease is fully developed depends very much upon the operation of the exciting cause. This horse, having a cold on him in the fair, and after a journey of sixty miles, if put into a *hot* stable would be very apt to contract the disease of which he died; if put into a *cold* one, he would be less likely to suffer. There are two kinds of inflammation of the chest and lungs, which are common to the horse, called acute and chronic. Acute inflammation may kill a horse in a few hours. It is caused by over-exertion, metastasis of disease, and hot stables. A horse may labour under chronic inflammation of the lungs, or their membranes, for many weeks. From the evidence which he had heard, he was quite certain that it was the former of these affections which destroyed the horse. It was rank nonsense to suppose that the lungs and diaphragm could adhere. There was one distinguishing symptom of chronic inflammation of the lungs which could never

be mistaken after death; that symptom he had not heard given in evidence, and it could not have existed without being noticed by every one present at an examination of the body after death. Bleeding might have saved the horse's life; but castor-oil and molasses he considered bad treatment to administer. Purgatives were poison to horses with inflammation of the lungs. He did not believe it possible that a horse labouring under inflammation of the lungs could survive the operation of purgative medicine. He had been twenty years in practice as a veterinary surgeon, and never knew a horse purged, while labouring under inflammation of the lungs, that did not die. He had known many cured by judicious treatment; but he did not think the horse in question had been treated fairly—he was quite certain he had not. It is possible that a horse may give a cough, and be perfectly sound. He usually makes horses to cough by pressing their windpipes before passing them; and, *if he could not succeed in making them cough, he would not pass them sound.* A horse might be full or swollen in the channel of the jaw naturally, and that, too, without having enlarged glands or disease of any kind. It was easy for common observers to be mistaken in these cases; but he would not certainly pass a horse as sound that had enlarged glands and a cough under any circumstances.

After a lengthy examination of the plaintiff's servant touching the treatment which the horse received from the time he left the fair till he took ill and died, his Worship awarded the plaintiff a decree for the price of the horse and costs.

An appeal, however, has been lodged; and the case, which has excited some interest in this locality, will come on for hearing at our ensuing assizes, which occurs on the 22d instant.

Ulster Gazette.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of June 30, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. A. CHERRY, PEACH, V.P., ERNES, GOODWIN, CHERRY, sen., CONSTANT, V.P., GODWIN (Birmingham).

THE Minutes being read and confirmed,

The Secretary read letters from Messrs. Watts and Mills, returning thanks for the honour done them in being elected Vice-Presidents; Messrs. Peach and Constant had also done the same, and both these gentlemen attended *ex officio* this meeting.

Mr. Arthur Cherry moved, that the same sum, viz. £50, as last year, be placed at the disposal of the Secretary. This was seconded by *Mr. Godwin* (Birmingham), and carried without any opposition.

The Secretary gave notice, in the name of the Treasurer, that the propriety of paying off a further portion of the loan be gone into at the next meeting.

Mr. Arthur Cherry's motion, that the Registration Committee be elected for the ensuing year, in accordance with the terms of the original notice, was seconded by *Mr. Godwin*, and the same gentlemen who were previously appointed were re-elected without opposition: these were Messrs. Mayhew, T. W. Mayer, Ernes, Braby, and *Arthur Cherry*.

A letter from a recently passed student, *Mr. Maguin*, at the Edinburgh College, was read, complaining of the conduct of the Examiners; but though several charges were made, none of them came under the jurisdiction of the Council, and consequently could not be gone into.

A letter was also read from a *Mr. Lockie*, complaining of unfair usage at the late examinations at Edinburgh, in which his name had first appeared as entitled to receive his diploma, and had subsequently been erased. As the statement made was borne out by the official return, it seemed proper that inquiry should be made as to the cause; and consequently, on the motion of *Mr. Goodwin*, seconded by *Mr. Godwin*, the Secretary was directed to apply to the Chairman of the Board of Examiners for Scotland, through the Secretary (*Dr. M'Gregor*), for an explanation of the circumstance.

A letter has been received by the President of the Royal College of Veterinary Surgeons from *Mr. S. M. Phillips*, of the Home Office, stating that an application had been made to *Sir G. Grey* from the Governors of the Royal Veterinary College and the Highland and Agricultural Society of Scotland for a new Charter, and that such application was now under consideration.

Mr. Arthur Cherry moved, and *Mr. Ernes* seconded, that the letter from *Mr. S. M. Phillips* be acknowledged, and entered on the Minutes.—Carried.

A discussion ensued on the receipt of this letter; it was, however, viewed by the Council as a proceeding that was to be looked for as a matter of course after what had been stated as to the intention of the parties applying, but that it was not at all requisite to take any further notice of it at present: it would, in all probability, die a natural death.

Adjourned.

THE VETERINARIAN, AUGUST 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

It appears, by our Council Report for the present month, that a letter has been received from the Home Secretary, Sir George Grey, by our President, announcing the arrival of a Petition from the Governors of the Royal Veterinary College of London, supported by the Highland and Agricultural Society of Scotland, for a separate Veterinary Charter. Our readers will remember that in a former communication on the subject—mentioned in THE VETERINARIAN for December last—Sir George Grey pledged himself to give notice of any such petition; and by this letter has that pledge been most honourably redeemed.

That a petition at once so unwarrantable and unreasonable will be complied with, seems most unlikely. Some persons, indeed, go so far as to say that the law would never sanction any such duplication of charter to the same professional body. Little, however, as we ourselves pretend to know of the law concerning charters, we must confess this is not our opinion. At the same time, we have the strongest grounds both for thinking and believing that no Home Secretary, unless under circumstances of a totally opposite character from any that can be shewn to exist in the present case, would feel himself warranted in submitting any such duplicate document to his Sovereign for signature. He must—he will—in the first place, clearly see his way into the *necessity* that exists for any second charter to the same body, or any branch thereof; and, in the second place, he will look into the consequences likely to accrue from the grant of *two* charters where there actually needs but one; and where there is already one which, though, for certain interested reasons, it satisfieth not the Schools or “Colleges,” *has* satisfied and *does* satisfy the VETERINARY PROFESSION AT LARGE. Sir George Grey has only to turn to the document he received from our President in September last,

and therein he will find every cavil and "objection" of the Schools *unanswerably* answered: and having done this, as a man of sound wisdom and unbiassed judgment, he will at once see through the whole affair; and in plain language will tell the present petitioners that he can discover no *good or substantial* reason for recommending any compliance with their unprecedented prayer.

Meanwhile, we should hope our Council will not lie upon their oars, but, at this renewed attack on their Charter, will "up and at" their opponents again; spurred on by the remembrance that it was with honest and persevering efforts in a good cause they obtained their Royal Charter, and by the full conviction that, by like exertions in the same cause, it is in their power to preserve it from all manner of "college" rivalry.

MISCELLANEA.

INTERESTING ANECDOTE OF A HORSE.

[Copied from a work called "*Personal Recollections*," by Charlotte Elizabeth; whose writings are much admired, being a talented woman and true Christian, a friend of the late Hannah More.]

WHILE at Annapolis and at Windsor, I had a horse provided for me of rare beauty and grace, but a perfect Bucephalus in her way. She was only two generations removed from a splendid Arabian, given by the good old King to the Duke of Kent, when H. R. H. went out in command to Nova Scotia. This creature was not three years old, and, to all appearance, unbroke. Her manners were those of a kid rather than of a horse: she was of a lovely dappled grey, with mane and tail of silver, the latter almost sweeping the ground; and in her frolicsome gambols she turned it over her back like that of a Newfoundland dog. Her slow step was a bound; her swift motion unlike that of any other animal I ever rode, so fleet, so smooth, so unruffled—I know nothing to which I can compare it. Well; I made this lovely creature so fond of me by constant petting, to which I suppose her Arab character made her peculiarly sensitive, that my voice had equal power over her as over my docile, faithful dog. No other person could in the slightest degree control her. Our corps,

the 7th battalion of the 60th Rifles, was composed wholly of the élite of Napoleon's soldiers taken in the Peninsula, and preferring the British service to a prison: they were principally conscripts, and many were evidently of a higher class in society than is usually found in the ranks. Among them were several chasseurs and Polish lancers, very fine equestrians, and, as my husband had a field-officer's command (on detachments) and allowances, our horses were well looked after. His groom was a Chasseur, mine a Pole; but neither could ride *Fairy*, unless she happened to be in a very gracious mood. Lord Dalhousie's English coachman afterwards tried his hand at taming her, but all in vain. In an easy quiet style she either sent her rider over her head, or by a laughable manœuvre, sitting down like a dog on her haunches, slipped him off the other way. Her drollery made the poor men so fond of her, that she was rarely chastized; and such a wilful, intractable wild Arab it would be hard to find. Upon her I was daily mounted; and surely the Lord watched over me then indeed! Inexperienced in riding, untaught, unassisted, and wholly unable to lay any check upon so powerful an animal, with an awkward country saddle, which by some fatality was never well fixed, bit and bridle to match, and the mare's natural fire increased by high feed, behold me bound for the wildest paths, in the wildest regions of that wild country! But you must explore the roads about Annapolis, and the romantic spot called "The General's Bridge," to imagine either the enjoyment or the perils of that my happiest hour.

Reckless to the last degree of desperation, I threw myself entirely on the fond attachment of the noble creature; and when I saw her measuring with her eye some rugged fence or wild chasm, such as it was her common sport to leap over in her play, the soft word of remonstrance that checked her was uttered more from regard to her safety than my own. The least whisper, a pat on the neck, or a stroke down the beautiful face that she used to throw up towards mine, would control her; and never for a moment did she endanger me. This was little short of a daily miracle, when we consider the nature of the country, her character, and my unskilfulness. It can only be accounted for on the ground of that wondrous power, which, having willed me to work for a time in the vineyard of the Lord, rendered me immortal until the work should be done. Oh, that my soul and all that is within me could sufficiently bless the Lord, and remember all his benefits! I was then unmindful of and unthankful for His protection; I revelled in the delights of a freedom that none could share but my dog, who never left the side of his associate. I will give you a sketch of the group in some lines composed during one of those

excursions; they may partly describe it. I found them among some old papers:—

I know by the ardour thou canst not restrain,
By the curve of thy neck and the toss of thy mane,
By the foam of thy snorting which spangles my brow,
The fire of the Arab is hot in thee now.
'Twere harsh to control thee, my frolicsome steed,—
I give thee the rein, so away at thy speed;
Thy rider will dare to be wilful as thee,
Laugh the future to scorn, and partake in thy glee.

Away to the mountain—what need we to fear?
Pursuit cannot press on my *Fairy's* career;
Full light were the heel and well balanced the head
That ventured to follow the track of thy tread;
Where roars the loud torrent, and starts the rude plank,
And thunders the rock-sever'd mass down the bank,
While, mirror'd in crystal, the far-shooting glow
With dazzling effulgence is sparkling below.
One start, and I die, yet in peace I recline,
My bosom can rest on the fealty of thine;
Thou lov'st me, my sweet one, and would'st not be free
From a yoke that has never borne rudely on thee.
Ah! pleasant the empire of those to confess
Whose wrath is a whisper, their rule a caress.
Behold how thy playmate is stretching beside,
As loath to be vanquish'd in love or in pride,
While upward he glances his eyeball of jet,
Half dreading thy fleetness may distance him yet.
Ah, Marco, poor Marco!—our pastime to-day
Were reft of one pleasure if he were away.

How precious these moments! fair Freedom expands
Her pinions of light o'er the desolate lands:
The waters are flashing as bright as thine eye,
Unchain'd as thy motion the breezes sweep by;
Delicious they come, o'er the flower-scented earth
Like whispers of love from the isle of my birth;
While the white-bosom'd Cistus her perfume exhales,
And sighs out a spicy farewell to the gales.
Unfear'd and unfearing we'll traverse the wood,
Where pours the rude torrent its turbulent flood:
The forest's red children will smile as we scour
By the log-fashioned hut and the pine-woven bower;
Thy feathery footsteps scarce bending the grass,
Or denting the dew-spangled moss where we pass.

What startles thee?—'twas but the sentinel gun
Flash'd a vesper salute to thy rival, the sun;
He has clos'd his swift progress before thee, and sweeps,
With fetlock of gold, the last verge of the steeps.
The fire-fly anon from his covert shall glide,
And dark fall the shadows of eve on the tide.

Tread softly—my spirit is joyous no more,
 A northern aurora, it shone and is o'er;
 The tears will fall fast as I gather the rein,
 And a long look reverts to yon shadowy plane.

* * * * * *
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There is more of it, but nothing to the purpose of the present history. It cost me something to transcribe this, so vividly is the past recalled by it. Would to God I might more fully devote to His service every day of the life so wonderfully preserved by Him!

ILLUSTRATIONS OF INSTINCT.

By RICHARD WHATELY, *D. D.*

A MAN builds a house from reason—a bird builds a nest from instinct; and no one would say that the bird, in this, acted from reason. But, in other instances, man not only does the same things as the brutes, but does them from the same kind of impulse, which should be called instinctive, whether in man or brute. And again—several things are done by brutes which are evidently not instinctive, but, to all appearance, no less rational than human acts; being not only the same actions, but done from the same impulse. I shall not at present inquire what is called reason, any more than what is denominated instinct. I would only say, that several things, which are allowed by every one to be acts of reason when done by a man, are done by brutes manifestly under a similar impulse: I mean such things as brutes *learn* to do, either by their own unaided experience, or as taught by man. *Docility* is evidently characteristic of reason. To talk of an elephant, a horse, or a dog, doing by instinct such things as it has been *taught*, would be as absurd as to talk of a child's learning to read and write by instinct.

But, moreover, brutes are, in many instances, capable of learning even what they have not been taught by man. They have been found able to combine, more or less, the means of accomplishing a certain end, from having learned by experience that such and such means, so applied, would conduce to it. The higher animals, of course, shew more of reason than the lower. There are many instances of its existence in domestic animals.

The dog is regarded as the animal most completely man's companion; and I will mention one, out of many specimens of the kind of reason to which I refer, as exhibited in a dog. This inci-

dent is upon record, and there seems no ground for doubting it, although it did not come under my own personal observation. This dog being left on the bank of a river by his master, who had gone up the river in a boat, attempted to join him. He plunged into the water; but not making allowance for the strength of the stream, which carried him considerably below the boat, he could not beat up against it. He landed, and made allowance for the current of the river, by leaping in at a place higher up. The combined action of the stream, and his swimming, carried him in an oblique direction, and he thus reached the boat. Having made the trial, and failed, he apparently judged, from the failure of the first attempt, that his course was to go up the stream, make allowance for its strength, and thus gain the boat. I do not vouch for the accuracy of this anecdote; but I see no grounds for disbelieving it, as it is of a piece with many other recorded instances.

There is another instance of this nature, which did come under my own observation, and is more worthy of being recorded, because the actor was a cat,—a species of animal which is considered generally very inferior in sagacity to a dog. This cat lived many years in my mother's family, and its feats of sagacity were witnessed by her, my sisters, and myself. It was known, not merely once or twice, but habitually, to ring the parlour bell whenever it wished the door to be opened. Some alarm was excited on the first occasion that it turned bell-ringer. The family had retired to rest, and in the middle of the night the parlour bell was rung violently: the sleepers were startled from their repose, and proceeded down stairs, with pokers and tongs, to interrupt, as they thought, the predatory movement of some burglar; but they were agreeably surprised to discover that the bell had been rung by pussy, who frequently repeated the act whenever she wanted to get out of the parlour.

Here are two clear cases of acts done by a dog and cat, which, if done by a man, would be called reason. Every one would admit that the actions were rational—not, to be sure, proceeding from a very high exertion of intellect; but the dog, at least, rationally jumped into the stream at a distance higher up from the boat into which he wished to get, because he found that the stream would thus carry him to it, instead of from it; and the cat pulled the parlour bell, because she had observed that, when it was rung by the family, the servant opened the door. It is quite clear that, if such acts were done by man, they would be regarded as an exercise of reason; and I do not know why, when performed by brutes, evidently by a similar mental process, as far as can be judged, they should not bear the same name. To speak of a cat's

having an *instinct* to pull a bell when desirous of going out at the door, or of an elephant's lifting up a cannon, or beating down a wall, at his driver's command, by instinct, would be to use words at random.

CATTLE FROM IRELAND.

Mr. TROTTER, the member for West Surrey, has obtained a return, shewing that 28,672 oxen, bulls, and cows; 329 calves; 25,701 sheep and lambs; and 45,993 swine, were imported into Great Britain from Ireland between the 5th January and 5th April, 1847.

SPORTING READINGS.

“ A CELEBRATED Irish sportsman, who keeps a few couple of the Irish basket beagles, for hare-hunting in his beautiful demesne, assured me that they once accidentally met with a stray fox, and, much to his astonishment, hunted him. The fox made no exertion to get clear of his company, but led them, in a quiet canter, to a moderately high part of the demesne wall, where he, no doubt, meant to impound, and take leave of the whole party: but he was mistaken (as calculating people sometimes are); for just as he was in the act of rising at the leap, three couple of these sagacious little animals most dexterously caught hold of his bushy tail, and were safely landed on the opposite side, when they continued the chase until he was compelled to take refuge in a neighbouring earth.”—*O'Connor's Field Sports in France*.

“ You may never have heard of the *troupeaux de la Mesta*, which in the sixteenth century employed 60,000 *bergers*. The sheep then amounted to seven millions. At present they exceed five millions. They are divided into flocks of 2000 each, with a *mayoral*, fifty *bergers*, and fifty dogs to conduct them. They traverse the vast tracts of uncultivated land in the arid plains of Estremadura, and in their destructive progress sweep away every thing in the shape of vegetation.”—*Ut supra*.

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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, M.R.C.S. and V.S.

[Continued from p. 372.]

PERMANENT NAVICULARTHRITIC LAMENESS.

PERMANENT LAMENESS of the affected foot is the result to be anticipated from such relapses, and this may be expected to set in at a period more or less remote according as circumstances prove favourable or otherwise; relapse following relapse at intervals, long or short, as the case may be, until, in the end, such morbid changes take place in the diseased foot as render restoration of normal function and feeling impracticable, and the consequence is irremoveable lameness. And such will too frequently happen even under every advantage of treatment and repose. When, however, neither rest nor remedial treatment are had recourse to, but, on the contrary, the horse, lame as he is, is worked on, permanent lameness, of course, will become established at a much earlier period: nor will the case experience any decided remission of lameness; though, in general, a good deal more lameness, even by such a case, will be shewn at one time than at another, owing to attendant circumstances, such as work, rest, shoeing, dryness or humidity of hoof, &c. A lame horse, thus neglected or abused, will commonly come before us with marked symptoms of the inveteracy and irremediableness of his ailment. From continual uneasiness or actual pain in it, he is in the constant habit of pointing the lame foot; and this removal of the weight off the foot while standing, combined with the little impress of weight upon it during action, in the course of time, becomes the indirect cause of certain physical alterations in the external foot, independent of any of another kind that may be going on in its

interior. From absence of its accustomed impress of weight from above, by the force of which, in health, it is kept expanded, the hoof contracts, particularly at the heels and quarters; and contracts, not only in its lateral but in its vertical diameter likewise, across from sole to wall: the lame foot becomes, in fact, altogether *smaller* than its fellow; the difference in magnitude between the two fore feet, as the horse stands before his examiner, being now perfectly obvious; and, moreover, the same is satisfactorily demonstrable by actual admeasurement. The shelving-in of the wall, and the concentric eminencies or *rims* upon it, are also now, generally speaking, strikingly conspicuous. There will likewise be felt some callous or osseous enlargement of the coronet and pastern, and perhaps of the cartilages at the heels as well; it being about this period that ossific changes are commencing.

At the time that the examiner, standing directly in front of the lame horse, is noticing these differences in the two fore hoofs, most likely his eye will be attracted upwards by the manifest flatness of surface, and apparent deficiency in substance, in the *shoulder* of the same limb, as compared with that of the sound one. So remarkable is this defalcation in cases in which pain and lameness have long been present, that, considering the obscurity in which the disease of the foot was years ago veiled, we cannot feel surprised that the shoulder should have been regarded as the actual seat of the lameness. We now, however, know better. We know that the shrinking or wasting away of the shoulder is but the natural consequence of lengthened repose of the part, or comparatively inadequate action of its muscles; it being an established law in the animal economy that muscles become large and bulky in proportion as they are exerted, and *vice versâ*. So that while the muscles of the lame limb are shrinking for want of action, those of the sound limb are actually swelling into larger size from having extra duty to perform: the circumstance of the shoulder evincing this change more than any other part, and of one muscle in particular—the *triceps extensor brachii*—striking our attention from its diminished bulk, arising simply from the shoulder being the most muscular part of the fore limb, and from that muscle being used in action, as well as standing, more than any other. Hence it happens that the fleshy prominence so conspicuous over the joint of the elbow in the sound limb is frequently hardly observable after long-continued lameness.

Generally speaking, relapses of lameness, as I have had occasion before to remark, take place in the foot first attacked by navicularthrititis. Now and then, however, the opposite fore foot will become attacked, and the disease, returning first in one foot and then in the other, will exhibit a sort of gouty or metastatic character; though

this, be it noted, is comparatively rare. When lameness attacks the sound foot while the lame foot continues unrestored, the horse being now lame from navicularthrititis in *both* feet, we may consider that the foundation has been laid for that deplorable state we call

GROGGINESS OR GROGGY LAMENESS.

In adopting which vulgar but significant appellations as the heading of this division of my subject, I, with Mr. Turner, regard them as synonyms of navicularthrititis, with this additional meaning,—that, to constitute *grogginess*, the lameness from navicularthrititis or its *sequelæ* must be present in *both* fore feet, in place of but one. There can be no doubt but that the epithet “groggy”—comparatively a modern one—was suggested by the unsteady, rolling, unsafe action of the lame horse being compared to that of a drunken man; and though in former days such was commonly connected with knuckling-over of the fore fetlock joints, and the tottering standing which such an insecure posture necessarily produces, yet have the pathological researches of later times demonstrated that veritable groggy lameness has its origin in navicularthrititis and its consequences. When horses from long or excessive work are what is called “shook” in their joints, such will add to their unsteadiness and want of stability, or, it is possible, may of itself produce an action that might be mistaken for “groggy.” Indeed, the loss of elasticity which the limbs of very old horses in the course of nature sustain, combined with the effects on them of excessive strain and work, produce a stilty, concussive, bone-shaking action of them, which, it appears to me, was what old writers on farriery meant to denote by the denomination of “shoulder-shotten;” but which is certainly not—has, in fact, no connection whatever with—what we call *grogginess*. I have myself seen horses, young in years and perfectly fresh on their legs, and sound in their feet, that have, after a month or two of what is called “shoulder-in” work in a riding-school, exhibited all the symptoms of the so-called “shoulder-shotten” or “shooken;” cases which at first I did not understand, but whose nature I afterwards came fully to comprehend, and at the same time learnt that the simple remedy for their restoration to soundness was withdrawal of them from such exercises, or, rather, giving them lengthened repose.

So that “grogginess” had better have its meaning limited to the lameness consequent on the actual presence of navicularthrititis, or some one or other of its *sequelæ*, simultaneously in *both* fore feet; and then, so understood, becomes plainly distinguishable both from *founder* and shoulder-shook or “shotten:” it being now agreed

among veterinarians, both of the old and new school, that founder is but another name for *laminitis* or fever in the feet.

It rarely happens, as I stated before, that a horse is attacked for the first time with navicularthrititis in both feet. Usually, but one foot is attacked, and to that foot the disease confines itself; and in the same foot still, generally speaking, relapses, should it return after disappearing; and it will do this for a second, a third, a fourth, and even a fifth time; though, in other cases, after a second or third relapse the fellow foot will fail; and now the foundation stone may be said to be laid for a state of groggy lameness.

In fact, it is evidently the pointing or resting of the lame foot in the stable, and the favouring of it while out, that, by imposing more weight and work upon the sound foot, causes the latter in the course of time to fail. For example, a horse will experience two or three or four attacks of lameness in the same foot. His owner, wearied by the tedious protraction of the case, and impatient at the expense of keeping so useless a servant, either summarily disposes of him, or, in a fit of vexation at the recurrence of lameness after so much rest and treatment, resolves to work him "lame or sound." Sold or unsold, it is probable that the lame horse, instead of being laid up afresh, the sufferer is kept at work, going sometimes quite lame, at other times—after rest perhaps—not so lame, until at length he begins to step short likewise with the sound limb, and by degrees proves lame in that also: in the end becoming as lame in one foot as in the other, or what dealers call "groggy."

In horses who are taken that care of that their lameness is attended to and treated the moment it is perceived, this double disease is often for a long period warded off, and has, as I shall shew hereafter, been known, under watchful management, to be kept aloof altogether; a circumstance which will add weight to the opinion that the disease in the sound foot is rather to be regarded as the result of over-weight and work, than as being referrible to any constitutional or local susceptibility. Perhaps, better than by any further description, light will be thrown on the progress of navicularthrititis towards grogginess by the relation of some cases.

C 6, troop horse, at the time four years old, was admitted for treatment on account of lameness in the near fore foot (*navicularthrititis*) on the 20th July, 1843; had the lame foot pared out, stood with it in a warm bath, had it poulticed when taken out of the bath, and took, during the time, a dose of cathartic medicine. No relief being afforded by such mild treatment, blood was taken from the foot, and a blister applied over the fetlock joint, as well as upon the pasterns and coronet; and he was turned at a fitting time into

strawyard. By the time he had been out a week he took a cold, and was taken up and treated for it. In a few weeks, after the blister had completely worked off his leg, he became sound, and under moderate work continued so until the following spring. On the 20th March on the following year he was again admitted into the infirmary for lameness in the same (near) fore foot. Again he was submitted to treatment, and again—on the 15th of May following—sent out, nearly sound, to be led out every day until he had quite recovered the use of his ailing foot. No more complaint was made of him until February 1845, when he was sent a fourth time for lameness. A couple of months' treatment once more restored him, but not for so long a period as before; for in September of the same year (1845) he returned again, but now lame in the *off* fore foot. A fortnight's treatment, however, rendering him sound, he was sent away to duty again. Knowing his great susceptibility of lameness, and being a horse of fine showy make, he was specially favoured in his duty, being as much as possible preserved from any hard work; and in this manner was he kept up, going very tolerably sound for nearly two years longer. Last May (1847), however, he failed in both fore feet, having become completely groggy, though still, of the two, lamer in the near fore foot.

In February 1837, E 15 (Corp. Lawrence's horse) was attacked with navicularthritus in the near fore foot; but after standing without his shoe in warm baths and poultices, and having cathartic medicine, was at the end of a week restored to soundness. Ten days, however, had not passed before he returned lame again in the same foot; and this time had sharper treatment, occupying a month. His soundness endured until the middle of June. Now, however, he was lame for the third time in the same (the near fore) foot; and this time, after being strongly blistered, was turned to strawyard. Having run there during the autumn, he was taken up about Christmas once more sound; and after this remained so until the beginning of February 1839, when for the first time he shewed lameness in the *off* fore foot. He was now bled in this foot, and afterwards blistered in both legs, and again turned into strawyard. In the middle of March he was taken up, and made a "convalescent," i. e. remaining without work in his stable; going now what is called "feeling" in both fore feet. In December 1840, having latterly been doing nothing but walking, whenever it came to his turn, backwards and forwards to the Horse Guards from Hyde Park barracks, he failed completely in both fore feet. Being a very fine horse, it was desirable to make every effort to save him; and, accordingly, once more he was received under treatment, though now with no hopes of success beyond that of mitigation of the pain in his feet. This time, also, his

treatment was wound up by blistering, the blister applied being of the most severe description. Palliation of the lameness was all, however, that was effected; and in the end, in the spring following, the animal was "cast," unfit any longer for cavalry duty. In June 1836 he was first attacked, and was lame on this occasion three weeks. Secondly, he was attacked in February 1837, and then remained under treatment eighteen days.

In some cases, owing to great care being taken, and the all but total abstinence from any thing that can be called *work*, grogginess may for years, or even altogether, be prevented taking place; and this has been effectuated, notwithstanding lameness has become irremoveable or permanent in one foot. G 5, troop grey mare, first became lame in her near fore foot in September 1845. On this occasion, the course of a few days' simple treatment restored her to soundness; so that after a few days of additional repose she returned to her work. On the 27th of April of the following year (1846), however, she returns lame in the same foot; and this time has a month's treatment, and afterwards a month's rest. For all that, however, in July following she becomes lame again in the same foot; and now, after treatment, is turned to strawyard, and has a three months' run. Still, under very moderate work she falls lame again in December ensuing; and though made once more quite sound, on being put to work this summer falls lame in the same foot for the fifth time, in July 1847, never having shewn the slightest symptom of failure in the opposite fore foot.

I can, however, relate a case wherein, under very moderate work or rather gentle exercise, for three times the above period, lameness was exclusively confined to the same foot. Eight years ago a general officer became possessed of a remarkably handsome well-shaped hunting mare, who, though never while in his possession hunted or put to any hard work, fell lame two years afterwards in her near fore foot, for which lameness she became my patient. She got perfectly sound again under treatment, but has never ceased since, at intervals, to go lame; and at the present time, with the diseased foot much diminished in size, is permanently more or less lame upon it; still at no time in the course of the six years she has been, off and on, lame in one fore foot, has she evinced any lameness in the fellow foot.

THE ACTION OF THE GROGGY HORSE is directly the contrary of that of the *foundered horse*: while the latter steps as much as possible upon his heels in order to avoid the pain occasioned by any stretch of the *laminæ*, the former treads the ground upon his toes, letting his heels down afterwards, in order that the heels may in the least possible degree receive impress from the pressure of weight from above as well as from the ground below. The pit-a-pat

pottering gait of the groggy horse is truly characteristic, not to the sight alone, but to the ear even: a "judge" of such matters has but to *hear* the sound made by the steps of such a horse to at once recognise his ailment. The sensation too, as might be expected, created by the action of the groggy horse upon his rider, is altogether peculiar: thus, a man both blind and deaf, mounted upon such a horse, would be able to tell, the moment the horse came to trot, whether or not he was groggy.

GROGGINESS MUST BE REGARDED AS A STATE OF INCURABLE LAMENESS. And yet, when such a state is not *confirmed*, i. e. has not from the length of time it has existed, and the alterations of structure in the feet which have consequently taken place, become established, grogginess frequently admits of alleviation, though *cure* may be hopeless. Even in such a case, however, it rarely happens that any permanent relief is conferred; seldom, indeed, any beyond what disappears as soon as the horse comes to return to any hard or severe work. Conscious of these facts, people seldom bring us groggy horses for treatment, while we, for our part, are equally shy in having any thing to do with such forlorn cases; and therefore it is that groggy horses are kept at work; and in certain situations, such as four-wheeled draught and agricultural employ, a great deal of useful work they will perform. The remark of old coachmen on the road used to be—"They didn't care how lame a horse was *afore*, so that he had the sound use of his hind limbs;" and for draught this is the really practical and proper view of the matter, the tug of draught depending principally on the hind quarters.

MILITARY VETERINARY POLITICS.

PETITION OF GEORGE JOHNSTON TO THE HOUSE OF COMMONS.

Veneris, 23^o die Aprilis, 1847.

THE humble Petition of George Johnston, late Veterinary Surgeon 6th Dragoon Guards,

Sheweth,

That your Petitioner begs leave most humbly to address your honourable House, and to lay before you a statement of the cruel injustice he has been subjected to during the period of Petitioner's service in the 6th Dragoon Guards.

In October 1845 your Petitioner was gazetted from the half-pay as Veterinary Surgeon to this corps; and no sooner observed his appointment to the Carabineers, than Petitioner, unsuccessfully, endeavoured to effect an exchange, in consequence of the character which the regiment had and has borne for years, of being tyrannically commanded. The very many annoyances which your Petitioner has since endured fully justify his preconceived opinion of ultimate unhappiness. It is not, however, the desire of your Petitioner to trouble your honourable House with the detail of minor grievance, but simply to draw the attention of your honourable House to the graver fact of your Petitioner having been driven to the unpleasant alternative of relinquishing his commission primarily from the circumstance of most strict adherence to duty.

In Her Majesty's Regulations for the performance of veterinary duties, it is directed, at Clause 28, "The Veterinary Surgeon should carefully examine all remount horses, and report in writing to the Commanding Officer, previous to the final approval, any that may appear to him defective, either in point of constitutional ability, or as not likely to arrive at adequate strength for the service, and every blemish or defect that may have escaped the notice of the Officer who purchased the said horses." On the 3d of October last nineteen young horses joined the regiment, which, agreeably to the Commanding Officer's own order, and in accordance with the above regulation, your Petitioner examined, and found seven of them unsound. Notwithstanding Petitioner's immediate and official report of the circumstance, an order was subsequently given to the Paymaster to defray their full cost, travelling expenses, &c. &c. to the dealer. These unserviceable horses having become the property of the public, your Petitioner addressed two letters to the Principal Veterinary Surgeon, requesting him to lay the subject before the proper authorities, so that your Petitioner might be put in possession of the necessary instructions how to act, not only in the present case, but in the event of future remount horses joining the regiment found unsound, and, after being officially notified to that effect, retained by the Commanding Officer.

Pending the consideration of this subject by the authorities at the Horse Guards, your Petitioner was ordered from Dublin to Newbridge, in consequence of a report made by Major (and Brevet Lieutenant Colonel) Hay to head quarters, that the troop horses under his command at that station were lamed by the careless shoeing of the farriers. Immediately on arrival, Petitioner proceeded to make a careful examination of every horse, and with very few exceptions was much pleased with the shoeing generally; accordingly, your Petitioner reported his opinion to the Com-

manding Officers both at Newbridge and Dublin; and finding that Colonel Hay still adhered to his former opinion, your Petitioner requested Colonel Jackson to apply to the Lieutenant General commanding the district, to authorise a board of Veterinary Surgeons to require and report upon the shoeing of the regiment, which application was peremptorily refused. Having been thus denied the only legitimate course your Petitioner possessed of settling a point involving his professional ability, your Petitioner wrote to the Principal Veterinary Surgeon, requesting him to submit this question also to the consideration of the Commander in Chief, at the same time expressing a hope that your Petitioner might be removed to another corps upon the first vacancy. In consequence of this, the Lieutenant General commanding the district was directed by His Grace the Duke of Wellington to proceed to Newbridge, to investigate the subject; when the Lieutenant General expressed his entire satisfaction relative to the shoeing, and desired your Petitioner at the same time to furnish him, for the information of his Grace, with the particulars of any complaint which Petitioner might be desirous to urge against his Commanding Officer. Your Petitioner did furnish the statement required, which the Lieutenant General detained until he submitted it to the surveillance of Petitioner's Commanding Officers, permitting them to make whatever comments they chose upon it.

Your Petitioner, to his great surprise, was soon afterward ordered to wait on the Commander of the Forces in Ireland, to receive through him a most severe reprimand from His Grace the Duke of Wellington. As it was a lengthy document, and read to Petitioner in the presence of several officers, including Colonel Jackson, it would be impossible to recall the full particulars of this manuscript; but your Petitioner well remembers being told "that he was not answerable for the soundness or unsoundness of horses when purchased—that his duty was confined solely to the veterinary practice—that he had no right whatever to report the unsound horses to the Principal Veterinary Surgeon, without sending same through the medium of the Commanding Officer—that great praise was due to the officer who selected these horses, and great credit to the dealer who furnished them."—The reprimand concluded by a threat at Petitioner's "peril to take any further notice of the subject." Petitioner has the satisfaction to state, that he took the opinion of another veterinary surgeon, who was present at his examination of the seven unsound horses, before he reported their unsoundness, and found that gentleman's opinion to coincide with his own. Notwithstanding these two opinions, Colonel Jackson retained, and the dealer sold, horses completely blind! which has

since been proved by a more recent examination made by the Veterinary Surgeon of the 13th Light Dragoons.

To give your honourable House an idea of the manner in which public money is wasted in the purchase of unserviceable horses, your Petitioner begs to state that he was ordered by Colonel Jackson to cast thirty-seven troop horses in the short space of seven months; of that number, nearly one-third had scarcely averaged one year and eight months' service. Petitioner cannot believe that the Commanding Officer has the discretionary power of obliging his private friends with the choice of horses from the ranks after they have become Government property. According to the 36th Clause of the Regulations for Veterinary Duties, "no horse is to be cast or discharged from the service without being immediately accounted for." In proof of this, when the present Adjutant was promoted, and requested permission to take his troop horse as a charger, paying the regulated price, the sanction of the Commander in Chief was a necessary requirement; and yet an instance can be furnished wherein a lady was allowed by Colonel Jackson to select and take away a troop horse (upon which considerable time and expense in breaking and feeding, &c. &c. had been incurred) from the regiment, for which a three-year-old horse was substituted.

If proof be required by your honourable House of the inconsistency of the authorities, in the rigid adherence to one rule and departure from another, your Petitioner would most respectfully oppose the severe reprimand received by him for doing his duty by the mention of a marked censure passed by the Commander in Chief on Colonel Jackson, in consequence of his having enlisted into the corps two recruits, against whom no allegation could be produced, save that each was half an inch over the authorised standard of height, wherein Colonel Jackson was required forthwith, at his own cost, to purchase the discharge of said recruits, and forward them to their homes. This being an established fact, Petitioner would have thought that Colonel Jackson should have been called upon to endure the consequence of his own mismanagement and stubbornness in the purchase of the unsound horses.

Your Petitioner being dissatisfied with the treatment he had from time to time received, and in order that he might proceed from Dublin to London, with a view, if possible, to obtain an exchange, Petitioner made personal application to Colonel Jackson, requesting him to procure a month's leave of absence, which Colonel Jackson distinctly refused, remarking, "Your conduct of late does not warrant any indulgence from me; and, let me tell you, I don't want to interfere with your professional character, but the two regiments

in which you served previously to coming to the Carabineers had no discipline, nor have you any military discipline. Have you got the full-dress uniform of the regiment?" to which your Petitioner replied "No;" then, said Colonel Jackson, "You will appear in the full-dress uniform of the regiment, in this office, within four days from this date." Petitioner answered, "He could not, as it would be impossible to have it made in that time," (the full dress would have cost £200). Colonel Jackson then remarked, "You have my order;" and your Petitioner left the office, thoroughly annoyed with such oppressive conduct, and, finding all chance of effecting an exchange unavailing, your Petitioner went to his quarters, and wrote a letter of resignation from the service, the acceptance of which was notified in the Gazette of the 5th of March last.

Your Petitioner humbly begs leave to remark, that he is not the only officer who has left the regiment in consequence of persecution, and would instance the case of his predecessor, of whom Colonel Jackson reported as being incapable of the proper discharge of his duties, which was proved unfounded, and for which Colonel Jackson was again reprimanded. Your Petitioner cannot conclude without expressing his deep sense of mortification at the manner in which his professional reputation has been abused; having been a veterinary surgeon for nineteen years, during ten of which Petitioner has had the honour to serve Her Majesty in the four quarters of the globe. When the insurrection in Canada broke out, your Petitioner was selected to proceed to that country, where he mounted two regiments of Cavalry (the King's Dragoon Guards and 7th Hussars), a simultaneous duty which no other professional man in the Army can boast of having performed. Your Petitioner further submits to your honourable House the extract of a letter from the Principal Veterinary Surgeon (Coleman) to the Adjutant General, dated "London, 10th January 1838," wherein it is stated, "The Veterinary Surgeons of regiments of Cavalry are wholly responsible for the soundness of horses when purchased; but the officers who select such horses are responsible that the form and substance and action of such horses are proper for the service; Mr. Johnston, however, is not only competent to his duty as a Veterinary Surgeon, but his knowledge of horses will be highly serviceable in pointing out to his superior officer such particular structures of parts as render horses more or less predisposed to disease of joints and feet, and lameness from other causes."

Whilst your Petitioner was in India, he lost his wife, father, and mother-in-law, and lost his own health, from the effect of coup-de-soleil, and is now obliged to return home a victim of out-

raged feeling, cast upon his own resources to support himself and family, which he humbly submits to your honourable House is as unmerited as it is dishonourable and unjust.

Your Petitioner, as an officer in the public service, and having been deprived of his position in the Army through the oppressive conduct of his superior officer (also in the public service), most humbly prays that an inquiry may be instituted by your honourable House into the truth of the allegations which he has made, and adopt such other proceedings as to the wisdom of your honourable House may seem just.

And your Petitioner, as in duty bound, will ever pray.

GEORGE JOHNSTON,
late Veterinary Surgeon 6th Dragoon Guards.

The annexed comments on the foregoing Petition are extracted from *The Times*, 10th Aug. 1847.

“We are fully sensible that it is at all times a most dangerous thing to meddle with the discipline of the army, or in any way to interfere between a commanding and a subordinate officer. There is much which would appear to be characterized by unnecessary harshness, if a question between two civilians were at issue, which, when we come to take into account the indispensable necessity of preserving the discipline of the forces in full vigour, may be not only necessary, but actually praiseworthy, from a superior to a subaltern officer. Some cases there are where no necessity can be shewn for acting with unflinching rigour and standing upon the extreme punctilios of discipline, which yet should be passed over without notice from the public, for the sake of preserving the general rule. We are no friends to habituating subalterns and soldiers to look to another tribunal than that of the Horse Guards, where their grievances and their disputes are most properly adjudicated upon,

‘Legibus antiquis castrorum, et more Camilli,’

according to the rules of the British service, and the customs established by the Duke of Wellington.

“There are cases, however, in which we feel justified in departing from our general line of conduct in this matter, and whenever an occasion shall arise in which either subaltern or soldier can shew that he has been treated with great and unnecessary harshness, and it appears to us that no evil consequence can arise, no ill precedent be established, by bringing his case before his countrymen, in order that it may be thoroughly sifted and under-

stood, we shall feel it to be a duty to give such publicity as we may to all the facts.

“Mr. George Johnston, late veterinary surgeon of the 6th Dragoon Guards, had, it would appear, long been at variance with his commanding officer, Colonel Jackson, upon matters connected with his duty as veterinary surgeon to the regiment. We cannot pretend to say up till the date of the transactions we are about to relate which of the two was most in fault. In all probability both the one and the other were to blame, although, if we are to judge from his subsequent conduct, Colonel Jackson was not likely to be distinguished by any peculiar mildness of manner or conciliation of demeanour. Amongst other purchases of horses made for the regiment, there was one of seven ‘remounts,’ which, as the custom is, were submitted to Mr. Johnston for inspection, and by him (in pursuance of the ‘Instructions for the Performance of Veterinary Duties,’ paragraph 36) rejected for various causes, such as blindness, spavin, ringbone, &c. The next step in the transaction is, that Mr. Johnston engaged in a correspondence with the Principal Veterinary Surgeon on the subject of the seven young unsound horses, without forwarding his letter, as it appears he should have done, through his commanding officer. For this he was sentenced, by the Duke of Wellington, to be severely reprimanded by the Commander of the Forces in Ireland, and he was reprimanded accordingly.

“It would be highly important that the precise nature and bearing of the grievances endured by Mr. Johnston (a statement of which is in the Duke of Wellington’s hands) up to the period of the reprimand administered should be clearly drawn out; it would be important, above all, to Colonel Jackson. For unless he can make it appear that Mr. Johnston had, prior to this period, evinced towards him a spirit of offensive insubordination, his subsequent conduct would seem to be very harsh as between man and man, and altogether uncalled for by any military necessity.

“Mr. Johnston’s situation in the regiment became insupportable to him. His most anxious, and surely not an unnatural, desire was to exchange into another corps. It came to his knowledge that there was a vacancy in the 7th Hussars; and, in order that he might avail himself of the opportunity, he waited on his commanding officer at the orderly room, to request that he would apply for leave of absence in his behalf. Before he could get his sentence concluded, he was interrupted by Colonel Jackson with ‘Your conduct of late does not warrant any indulgence from me; and, let me tell you, I don’t want to interfere with your professional character, but the two regiments in which you served previous to coming to the Carabineers had no discipline, nor have you any military

discipline.' Can Colonel Jackson make good these words? Who constituted him a judge in the matter? Was not his remark harsh, petulant, and unnecessary? Harsh, however, as it was, it was succeeded by what looks very like an act of still more petty and irritating despotism about a full-dress uniform, which he directed Mr. Johnston to procure and appear in in four days' time—a period within which the uniform could not be made.

"Upon this Mr. Johnston took what appears to us to have been a false step; but he explains it by the excitement of the moment, and the maddening nature of his Colonel's conduct towards him. He tendered his resignation.

"It was not until the excitement had passed off that he became fully aware of the consequences of his act. The result of it to him and his family is starvation or the workhouse. He has served in the four quarters of the globe, and he appeals to the confidential returns of the regiments in which he has served for evidence of his good conduct. The only slip in his military career was the unfortunate act we have mentioned above, which does not, however, appear to have been accompanied with one single irritating word to his commanding officer. In India Mr. Johnston has made shipwreck of his health in the public service; and now he stands alone in the world, without friends, and without one farthing with which to purchase a morsel of bread for himself and his family. Surely this is a very hard case.

"He has made two applications to the Horse Guards, the first to be reinstated in his rank in the service for the purpose of retiring on half-pay, the second for permission to receive a commuted allowance for his commission. Both applications have been summarily refused. Mr. Johnston quotes numerous precedents of officers who had been guilty of heinous offences, who have (some of them even after sentence of a court-martial) been reinstated in the service, or permitted to receive the commuted allowance, but without success. All he gets is the driest form of official refusal.

"In thus briefly relating the leading facts of this most distressing case we have purposely abstained from any irritating remark. We are yet not without hope that the Duke of Wellington, when he comes to take into account the long services and good conduct of Mr. Johnston, as well as his loss of health in India, and the circumstances under which his resignation was tendered, may yet be induced to reconsider his determination.

"There is one person above all who might come forward gracefully and generously in the matter, and whose recommendation would not, in all probability, be without effect. Colonel Jackson, we should imagine, cannot altogether stand clear with his own conscience for having first irritated Mr. Johnston, and then taken

advantage of the rash act he committed under that irritation. The indulgence Mr. Johnston asks is not of a nature to bring them again into contact upon regimental matters. He wishes still to retire from the service, but in such a manner as that his retirement may not entail utter and irretrievable ruin upon himself and his family. We cannot think that we make an appeal in vain to a soldier's generosity. Whatever of offence was given has now surely been more than expiated, and the time may come when both the Duke of Wellington and Colonel Jackson may look back with satisfaction upon having saved from absolute ruin a man who appears to have long and faithfully served his country."

ON MYÖITIS.

By ARTHUR CHERRY, M.R.C.V.S.

(Continued from page 461.)



"Man, who in his own case retreats from the barbarity of the middle ages, still maintains it towards the child (scholar), ever starting from the inhuman principle, that our nature is bad, that education is not its good economy but its reformation, that art and human wisdom ought to amend and chastise the instinct that God has implanted within us."

* * * * *

"The animal! Dark mystery! An immense world of musings and dumb sorrows! But in default of language, *signs too visible express those sufferings*. All nature protests against the barbarity of man, who disavows, debases, and tortures his inferior brother; she accuses him before Him who created them both."—MICHELET.

AFTER what I have before written it may appear supererogation to again advert to elements; but on a subject which so little has been said upon, and so little attended to, I feel that I am but doing that which is right to attempt to raise my art above that general condemnation which has been so pitilessly, so unjustly cast on it: we have been branded with the term of barbarians—cruel in our remedial means, and wanton in inflicting pain. I deny the imputation: our end, our aim is that of mitigating pain—to restore that which has been injured. Acting in error, judging falsely of the symptoms before us, and thus by our ignorance inflicting pain where we mean the reverse—in this way misjudging we may be; but all those who feel that they have a duty to perform, and these

comprise the large bulk of our body, if they misjudge, if they act in error, do so *not* intentionally: it is hard to condemn those who would willingly do better if they knew but the way.

How great a debt do those who are placed as teachers owe to humanity at large! how important is their position, the inculcation of truth and knowledge! how much have those who neglect their duties to answer for; not only to those who have placed themselves under their tuition, but to the community at large; and are we to consider that the commands as given to us by the inspired writers as unworthy of attention? Are we not expressly commanded to succour the animal that is in distress?

Then how much are all interested in the pursuit of our art. Do we blame the savage, the untaught, for faults, nay, crimes, which in the civilized, the taught, the trained, we punish with the utmost severity?—assuredly not; therefore do not let us blame those who are but little taught, and in that little much that is erroneous. Carefully inquire into the amount of what has been taught in our professional schools for the last half century, and how small, how insignificant is the result; actually less of the really valuable practical part of our art than was known and practised by the old farriers, a class that was to be superseded; and if we inquire into the advances that have been really made—and they are numerous—from whence have they come? from the single, too often unaided, exertions of individuals who have endeavoured to rescue their art, both by precept and example, from its ignorance, its barbarism; look at the list—not a small one—many are gone, some still remain, and others are rising—then inquire how they obtained their knowledge; the answer is always a universal one,—by their own labours, by the study of the laws of nature.

When I look around and see such men as Moorcroft, Youatt, the Fields, the Turners, Percivall, the Goodwins, *et hoc genus omne*, steadily pursuing the same course for years, I cannot think that our art will for ever remain in the degraded position into which it has been thrust. Much that has been done may be erroneous—no man can be perfect; but yet enough remains to stamp their labours with high value: there is this one important point clearly manifest, that *truth* is the one grand object, theory and dogma are alike systematically eschewed.

I speak feelingly, strongly, it may be, though I do not mean it harshly; but I cannot bury in oblivion the fact that I have spent many weary years, the best of my life, in endeavouring to forget; for literally, I have had to unlearn that which I had been taught in our schools, and for the attainment of *any principles whatever* I had to seek them in the schools of human medicine. Lessons such as

these are too indelibly fixed to be forgotten, and I have found that all those who pursue their art with ardour and interest confess the same. Gladly would I learn that things since my day are mended; but, alas! I fear that it is only a wish of my heart, not a reality.

The munificent Creator has placed in our hands means whereby the pains and penalties to which "flesh is heir" may be assuaged; not to use them is culpable, and to use them improperly is still more so. In every country may be found indigenous remedies for indigenous diseases; and have we not the wide world besides to cull from? But unless the causes, symptoms, and progress of disease are known, how can we employ the power at our command? It is like putting a beautiful piece of mechanism into the hands of a Hottentot and expecting the same to be regulated or repaired. Before a child can read, it must be taught the alphabet—so must a professional student be taught the elements of the profession he is to follow. The principles upon which investigation is to be conducted, the method whereby observations may be reasoned on and tested as to their accuracy, and many other points, which, though they may appear to some trivial, are the very keystone to the arch, and the want of which will be felt for the remainder of a life.

To attempt to administer to the ailments of a living being, whether man or animal, without the requisite knowledge to be enabled to judge in the main with correctness, is cruelty, barbarity, and death, in such hands nearly allied to murder, and in a correct sense worthy of as severe a punishment, because it is, it must be, done with a consciousness of the incapacity.

I feel strongly tempted to quote instances in which all that I have stated is borne out, or, indeed, more than borne out; and so numerous are they, that you may find them at every step: but I will not willingly hurt the feelings of those who, being under a delusion, will, nay must, inevitably awake to a sense of their position. I may cast a smile at the deluded, but it is one of pity, not derision.

But a few days since, I, by mere accident, was perusing a periodical with high-sounding names appended, in which the subject nearest my heart, the advancement of my art, was so completely falsified, such puerile conceits dignified with the name of science, such personal self-laudation, that I felt humbled, ashamed of the art to which I belonged. A satire more bitter, a condemnation more severe, could not exist, could not have been advanced by the direst enemies that science can have; but

"Heaven me such usage send,
Not to pick bad from bad, but by bad mend."

The object I have hitherto had in view in remarks on the disease of muscular fibre, which I have termed myöitis, has been to

shew that disease may exist unsuspected, and producing marked and peculiar symptoms which have been overlooked, unheeded, or referred to a wrong cause. In so doing, however, I have entered rather closely into one or two conditions of the disease; but I will endeavour to describe the more particular forms with which I have become acquainted in as succinct and plain a manner as I can, and shall close my observations with these specialities; but before I do so I still think that a few further general remarks may not be out of place.

It may appear in an abstract sense but of little import what character or kind of injurious agent may be specially acting in any one case, that is to say, when a given state is positively established, as, for instance, "stringhalt." Now it so happens that this disease, or, if you will, derangement of function of the hinder extremities, whether of one or of both, may arise from two distinct causes; the one from disease situate within the theca vertebralis, or at the origins of the nerves; the other locally, in some one or more of the muscles of the limb. It therefore follows that the parts in the one case are in a very different condition to what they are in the other, and susceptible of different treatment, and of diagnosis; yet, outwardly, the characters are almost, if not quite, identical. Many other diseases and their combinations might be adduced in exemplification of these views, but every reflecting practitioner will bear me out on this point.

The nearest disease in character to the one I am here attempting to describe is rheumatism, and one, too, of frequent occurrence, and much pains are requisite in diagnosis to distinguish the one from the other: the difference between them, according to my view, is this;—"myöitis" is an affection of the muscular fibre; "rheumatism" of the nerve, or its supplying neurilema, or of the nervous fibrillæ distributed within or belonging to a muscle or muscles, or the contiguous parts. Now these two states at once shew different conditions of the system requiring different methods of treatment.

The next form of disease to which allusion has to be made is one not of very frequent occurrence as a distinct disease, though common enough as an adjunct, viz. disease or derangement of the *cellular tissue*; and the indications to be attended to here are too manifest to require comment.

I need not repeat that it is necessary to inquire into the conditions of the tendon as well as the body of the muscle itself.

Lastly, it is absolutely imperative to carefully investigate disease, or, more properly, its symptoms, so as to be certain that the diagnosis does not confound effects for causes, and *vice versâ*: for example, inflammation in the fibres of a muscle—the result of

over-exertion confounded with an attack of rheumatism, i. e. an affection of the nerves—or, still worse, what I once saw, a horse suffering under an attack of acute rheumatism, and affecting nearly the whole body, *pronounced to have and treated for inflammation of the lungs*; which being pursued for several days, with aggravation of the symptoms, as might naturally be expected, was looked on as a case that must end fatally; when a change from this course of error to the one proper for the real nature of the malady produced a rapid change in the appearance of the suffering animal, and a speedy restoration to health.

Long and close observation of the working of the laws of animal life has taught me that no anomalies exist in nature; it is our ignorance which leads us to call them so: and I must candidly acknowledge that, since this fundamental truth was forced on me, I have had a much lower opinion of my own professional lore, and have felt more charity towards the failings of others.

[To be continued.]

INJECTION OF FLUIDS INTO THE STOMACH THROUGH THE NOSTRILS.

By EDWARD MAYHEW, *M.R.C.V.S., Spring-street, Westbourne-terrace, London.*

To the Editor of "The Veterinarian."

Sir,—WILL you be kind enough to find space for the following application of an instrument in the possession of every veterinary surgeon to a new purpose?

Having to attend upon a horse suffering under tetanus, the closure of the jaw rendered it futile to attempt the administration of medicine by the mouth. The case was hopeless from the first, and the result was such as I warned the proprietor to anticipate: nevertheless, the owner clung to hope, and I was entreated to do the best in my power.

As croton oil, by injuring the mouth, always inflicts torture upon the animal, I did not like to employ it in a disease for which tranquillity is a remedial agent. The bowels, however, being confined, it became imperative to relieve them. The question now was, how could I, under the circumstances, give any drug in bulk and in solution? The necessary restraint required to administer a drench must aggravate the spasm, and I was not assured that it would not be attended with still greater evil.

After some reflection, I applied the common elastic horse catheter to the ordinary enema syringe: the tube I then introduced into the nostril, and easily propelled it so far that the instrument almost touched the nose. By this means I was enabled to give whatever I pleased in a liquid state, and I have given a pail of gruel in a few minutes.

The process is very simple, and, so far as I have ascertained, it is attended with no danger. It may, with safety, be tried upon a sound horse, who will offer far less resistance than might be imagined. May I so far presume as to request you will make the experiment; and for the assurance of your readers, and the interests of our science, report in what degree the result corroborated my assertion?

The catheter should, in the first instance, be bent at the end, so that it may dip through the posterior opening of the nasal chamber. Having given this slight curve to the extremity of the tube, I pass it along the floor of the cavity, and generally it glides onwards with facility. If any resistance is met with, do not attempt to overcome it by force, but withdraw the catheter, and give to it a further downward inclination, after which it will generally pass.

The horse, on the first introduction of the instrument, usually snorts for a few seconds, and that snorting will be increased if any unnecessary moisture is applied to the exterior of the tube, which answers best when employed in a clean and dry state. While the snorting continues the operator should still push onward the catheter, and, when it is sufficiently inserted, hold it there till the animal is quiet, which I have found him to be before the whole length has been introduced: subsequently the horse remains perfectly still; and those on which I have tried this plan—however contrary the fact may be to expectation—appeared not to dislike the proceeding.

The gentlemen to whom I have recommended this method have objected to it, that there was peril of getting the catheter into the larynx, and of injecting the fluid into the lungs: such a fear is entirely groundless. Supposing so strange an accident possible, long before the syringe could be used the operator would be energetically informed of his mistake. The most sensitive membrane in the body would not tamely submit to the intrusion of a foreign substance: the violent excitement it must call forth would cause the operator to withdraw, and probably expose him to serious injury.

I am not aware that there is any chance of an accident occurring from such a cause: Nature too cautiously guards the glottal opening, and the direction of the instrument guides it into the pharynx.

This application of an old instrument I have spoken of as being

useful in cases of tetanus, but there are other disorders in which it may be serviceable. When disease renders it dangerous to raise the head of the animal—when injuries to the mouth cause the passage of food by the ordinary course to be objectionable—and when, from various causes, the power of deglutition is lost, this method of supporting life may be advantageously resorted to.

I have the honour to be, &c.

Aug. 14, 1847.

* * * We have made the experiment, and found it succeeded admirably.—ED. VET.

THE ANTI-CONCUSSION HORSESHOE,

Invented by Mr. CLEMENTS.

To the Editor of "The Veterinarian."

Sir,—THE pattern shoe which I send you for trial I have termed an Anti-concussion. In placing it before the public I do not introduce it as one that is to be used for ordinary purposes, but as a shoe applicable only in certain cases. Many are the shoes that have been invented with the same object, yet, when tested by practice, have been found totally inapplicable; for instance, I might mention Mr. Coleman's spring-heeled shoe.

The application of Indian rubber to shoeing has long engaged the attention of veterinary surgeons, but that its adaptation has hitherto failed we need not be surprised, when we consider the mode in which it has been applied.

The common method has been to place it between the hoof and the shoe after the manner of leather, thus exposing it to the action of two hard substances; the one (the shoe) possessing a flat surface, the other (the hoof) a sharp one. Hence, every time the horse puts his foot to the ground the Indian-rubber is in a position similar to what it would be were it between the nippers of a pair of pincers, than which there is no instrument would cut it more effectually.

There is another thing which militates against the ordinary mode of applying it, which is, that, every time the Indian-rubber is compressed, the nails of necessity work up and down in the hoof or the shoe; the consequence being, that either the clenches are raised or the heads of the nails are broken off. You will perceive that, in the shoe I have taken the liberty of sending you, these evils are entirely obviated by the Indian-rubber being placed between plates of iron, and rendered altogether independent of the nails.

The Anti-concussion consists of two shoes, one being conspicuously light or thin, and the other of the usual substance. The larger or heavier of the pair has no nail-holes, but, in the stead, four bores for an equal number of moderately-sized bolts to pass through.

The thin shoe has holes made for the nails, and is to be attached to the hoof, after the customary fashion: through it pass the four bolts, two on either side of the toe, and two at the heels. The upper shoe, when on, is to be covered by a slip of Indian-rubber, which should be shaped so as to overlay the entire surface of the shoe; then, by means of nuts screwed to the bolts, the lower shoe is to be firmly fixed, and the whole to be made secure.

The lower shoe thus alone receives attrition, and will only require to be from time to time replaced. Any light ordinary shoe will answer for that purpose, and no smith should find it difficult to forge the upper plate. The expense of the bolts and nuts is very trivial, and the cost would not altogether exceed that of shoes with leather soles.

The bolts are made with square counter-sunk heads, and are left unattached to the shoe, so as to allow of a certain degree of play. The nuts are made of a cone shape, and fit in a corresponding cavity in the lower shoe; and are easily tightened till they are level with the ground surface by means of a key which fits into two nicks that are made upon the surface of them.

The Indian-rubber that I use is vulcanized, and the person from whom I bought it informed me I could have it made of the exact shape, thereby preventing any waste.

This shoe has for its object the prevention of concussion; it does not pretend to any thing more. To say that it tends to facilitate the expansion of the foot would be to utter a falsehood, which the most inexperienced in the art of shoeing could point out; but that it will prevent concussion nobody who has seen its construction can deny. That it is a shoe that will stand the test of practice I can assert, having tried it. I had a pair placed upon the fore feet of a mare, and she went beautifully with them; and I find that they make considerably less noise than the common shoe.

I propose that it should be used in those diseases either produced or aggravated by concussion, such as ringbones, navicular disease, splent, &c., but more especially as a preventive against relapse of navicular disease.

Your's respectfully.

REASON AND INSTINCT.

By VETERINARIUS.*To the Editor of "The Veterinarian."*

Dear Sir,—MAY I be allowed the liberty of a few observations on the "Illustrations of Instinct" which appeared in your last?—and remain

Your much obliged servant,

VETERINARIUS.

"A man builds a house from reason—a bird builds a nest from instinct; and no one would say that the bird, in this, acted from reason." In the first, man does not always build a house from reason, as is plainly exemplified in those which remain unfinished from want of money; and I cannot see why a man is not as instinctively to build a house as a bird a nest: at all events, Dr. Whately does not prove the matter. Again; every man builds a house or seeks a shelter of some kind, be it wet or dry. *Every* bird does not. A bird does not build a nest for itself alone, but when it has mated and intends to bring up young, and this before it has any experience of the "mated life." Birds are allowed to propagate their species from instinct; and why build their nests, which is a part of the process, from the same cause? It mates from instinct, and it builds the nest from instinct, without any *reasoning* as to why it should be so. Man does *not* "do the same things from the same impulses." He certainly does some things with the brutes from the same impulse; but that impulse is instinct, not reason. Man connects the chain of cause and effect (reasoning), and the brute does not. The latter has to "learn to do things," and the former does many without either teaching or learning. Docility is *not* "evidently characteristic of reason," for reason is the frequent cause of great contention. What share has habit and experience in the education of the elephant, horse, or dog? and what in the tuition of the child's reading or writing? Docility in those animals is more characteristic of superior power than of reason or instinct either. The great proportion of that superior power is man's reason.

"They (the brutes) have been found able to combine, more or less, the means of accomplishing a certain end, from having learned by experience that such and such means so applied would conduce to it." Very true; but the brutes have to "learn by experience," while man arrives at the same, and has correct conclusions, without any, and by the aid of reason alone.

The difference between man and the dog in the anecdote which follows is very evident:—Man, from reason, would not have jumped into the water and attempted to swim against the current at all, but would at once have gone up the bank of the stream to a higher point than the dog did, and thus have lessened the labour of reaching the boat four or five times in addition. Now the dog acted from instinct in his first attempt, from experience in his second, and from reason in neither. A dog on one side of a hill and his home on the other, would not, probably, go round the foot of it. Man is aware, from reason as well as observation, that the shortest length between two points is a straight line. The dog is aware of this from experience, perhaps, more probably from instinct. The man would reason that the road round the hill would be nearly equal to that over it (the triangle over it to the summit of the base), minus the labour of ascent.

Dr. Whately justly remarks, the cat rung the bell from observation; but observation is not reason. I will suppose a person who knew nothing about bells, and who for the first time saw a bell-rope hanging from the roof; do I assert too much when I say he would reason it was there to be pulled? Would this cat, if allowed to fail several times in the attempt to attract attention by the noise of the bell, continue the practice? Would man give it up, or reason on the cause of silence? A cat shut up continues to mew, whether there is anybody to hear or not: a man in such circumstances would not do so. You might say if cats do, dogs do not; certainly, but not until *experience* has shewn them it is of no use. The acts should not bear “a similar name,” because they are not done by “a similar mental process.” Although it cannot be said that every cat has an instinct to use the tongue of a bell, every cat has to make use of its own. Does it, then, reason why it mews? or, if Dr. Whately’s cat is to reason on the ringing of the bell, why not on the opening of the door when the handle of the lock is turned? An elephant may not lift a cannon from instinct, but it may from the habit of obedience to its keeper. Habit is not reason, for there are many unreasonable habits. It may certainly instinctively obey one who has acquired the habit of obedience from the power of donning reward or punishment, or from other means or causes; besides, an elephant may very instinctively beat down a wall which keeps him from something to eat, more especially if he be hungry at the time.

In conclusion, I would say that brutes do that from tuition, instinct, habit, observation, experience, &c., which man can do without the aid of any of them, by the use of his noblest and unshared gift, reason. Both possess instinct; one alone possesses *reason*.

Extracts from Foreign Journals.

LECTURE ON THE INFLUENCE OF EXERCISE ON MAN AND ANIMALS.

[From "La Clinique Vétérinaire."]

MOTION is life. Free and regular motions, executed in accordance with animal structure and organization, evince health: all living beings seek exercise to preserve health. And every one that avoids motion, and makes any effort to maintain itself in inaction, is not in health. Immobility complete constitutes death.

The physiological study of the beings around us demonstrates that they are especially designed for locomotion. The infant animal of a day old, once launched into existence, exercises itself more and more, from day to day, in proportion as its strength increases. Instinct urges it to seek its mother's teat, where it finds food already prepared, lasting until such time as it is able to seek nutriment elsewhere. It braces up its limbs, it walks; speedily becoming more fearless, and soon trusting itself to a run. Feeling more and more at liberty, power and courage grow up in it: it quits its mother. In one respect it feels itself in the enjoyment of independence; in the other, it feels it is under the same law of Nature as all other creatures; a law which instinctively urges it to provide for its own wants, and thus watches over its preservation, and, by the act of reproduction, over the preservation of its whole species. Again, in searching for food, the animal is compelled to move about; its limbs grow strong from exercise, and its body becomes developed in the same proportion until it reaches mature growth.

The impulsion the body receives to put it into action is derived from the fleshy, fibrous, elastic substance we call *muscle*, which clothes the osseous framework. Muscles constitute the organs or instruments of motion. Although, however, in themselves the seat of action, they evince no movement but through the influence they receive from the brain, the source whence is derived the activity of all the senses. Next to the brain, the noblest part of animal organism, one which human penetration has hitherto failed to unveil the mystery of, and probably for ever will, and which is most wonderful, is the muscles, the veritable actors in motion, in exercise, in work;—their attachment to the bones, their structure, the cause of their intumescence, their number and their insertion, their uses or properties; lastly, the admirable accord-

ance with which their functions are conducted. Myology opens a vast field for meditation, both to the researchist in anatomy and to the philosopher. Hence it is in an especial manner that the thinker admires the work of the Creator; here it is that he is struck with astonishment at divine grandeur and immensity. Works all so perfect as those he meets with in the animal economy surpass the powers of his imagination. Research carries him to a certain point at which science halts, unable to proceed further, and he is forced to confess his inferiority: science is compelled to acknowledge a power over her, which, ever active, and never in need of repose, sets an ensample of activity. It is the veritable *perpetuum mobile* which gives life to the entire creation, and at which man must for ever marvel without being able to discover the key of action.

As for man, muscular action may be said to extend its influence beyond his mere physiological position: it affects even his social relation. Among the ancients, legislators and governors were seen regulating the exercises they would have the people practise: they judged that activity, exercise of body, was the best means that could be taken to have well-constituted and useful members of society. The Olympic games were set up with the view of keeping in practice a people by nature warriors. With the Greeks and Romans, the first quality a man could possess was strength and vigour. The principle of the ancients was, that an energetic, great, and courageous soul could inhabit none but a well-constituted, strong, and powerful body: in such a one they beheld expression of mind urging him into action. The vigour of their law in this particular smacked even of cruelty. They ordered that mothers bringing forth malformed progeny, or such as bore any unequivocal sign of physical imperfection rendering him unfit for the usual exercises, should put it to death from birth. And so long as the people obeyed these too rigorous laws, and led a life of activity, labouring with persevering energy towards their development, physical as well as moral, we find them sober, robust, and great. Do we of the present day not look with astonishment at the traces of courage and devotion of the people of antiquity? History informs us that their energy and bravery have even gone contrariwise to opulence and vice, luxury and inaction, by which they have been led on to destruction. The general movement, the activity and industry, which have given birth to the arts and sciences, it is that constitutes the veritable base of the social order and prosperity of nations. The more man exercises his faculties, physical as well as moral, the more his well-being prospers; while the more he abandons himself to inactivity, the more he hastens his destruction.

Impressed with this verity, that exercise favours and preserves health, the primary condition of life, science has made it her business to study every possible movement of which the human orgasm is capable. Anatomists have succeeded in decomposing, thus to express it, one by one, the actions performable by man and animals. Comparative anatomy points out to us the chief moving powers; it shews us how they co-operate in endless combinations. And this analysis has enabled us to comprehend more perfectly, and, above all, more didactically, all those phenomena which more particularly constitute locomotion, the point we are principally aiming at in the present essay; seeing that we have especially in view THE HORSE, whose whole value at the present day consists in the exercise or labour for which he is fitted. It will be our endeavour, gentlemen, to lay before you the phenomena of locomotion, methodically arranged, so that calculations may be better made of the cost of strength of each movement, and how the greatest effect is produced by it at the least possible expenditure. This it is that constitutes the calculated distribution of the strength of a horse: in a word, his *equilibrium*. Gymnastic is what brings man to this state of perfection; equitation, the horse.

Exercise is requisite for the production of a good and substantial breed of horses. Without labour—and that somewhat forced too—as well for breeding mares as for stallions, we can never breed stock for hard work, never produce a proper cavalry horse. From the day that the stud department accepted the English stallion, a horse that demands so much care, and who, under our management, appeared more like a dog-horse than one fit for the purposes of reproduction, our stock, in former times no less steady at work than hardy, and which for a long time all Europe had been envious of, has visibly declined. Stallions the property of government are commonly more sterile than others, from the circumstance of their being deprived of exercise. Too much inaction extinguishes the generative power. In this respect wild horses shew us an example worthy of imitation. And, besides, the powerful stallion has always an advantage over the weak one, for mares in a state of nature always give preference to the more active and vigorous; the indolent stallion, without energy, being refused and frequently ill-treated by them. In a herd of wild horses the weakly cannot keep pace in their laborious courses with the stronger; for while such amounts but to play, forced to stop for breath, the laggards-behind, dispersed and separated, become the prey of ferocious beasts, or else succumb under an insalubrity of climate which their feeble constitutions are unable to resist.

The domesticated horse has neither to fear the teeth of the wolf nor the inclemencies of seasons, and yet he is no longer the same

animal. His whole species has submitted to notable modifications. Now-a-days, man directs the intercourse of the sexes. Our present breed of domestic horses is, in truth, man's own, making allowance for the instinct of self-preservation, modified by domesticity. The horse no longer breeds but at our command. Since, then, man has made himself absolute master over horses, it is his duty to find means to make amends for the privilege he has deprived them of; and this compensation will be found in work. It is in well-regulated exercise alone that the domesticated animal finds any guarantee for a long and supportable life.

Let us recall to mind what Lord Russell has said in regard to horses, touching the influence that exercise and well-regulated and sustained work has upon them:—"The foal," says he, "inherits direct reciprocity of qualities from its parents; but the attributes of the mare descend most directly, and have the longest duration: those which, with the most certainty, descend are a good constitution and endurance of work. Want of exercise, and too long standing in the stable, causes the blood to grow vicious, and the muscles to lose their elasticity and energy. The horse in health, using his strength in the open air, and thus exhausting his powers, breathes with expanded lungs: every muscle, every fibre of his body, is on the stretch, ready ever for renewed efforts; so that it is not the muscles only that become augmented by a well-regulated exercise, but the organs of respiration as well benefit by it. The lung of the working horse presents a healthy aspect; it is voluminous, and plays its part with freedom; while, on the other hand, in the stallion, on whom too much indulgence has been bestowed and too little activity required, we find a lung shrunk and doughy, and without energy. In the growing colt which we deprive of exercise, we stifle the most promising qualities; and he, having them undeveloped in himself, in his turn robs of them all his posterity. Thus it is that we have, step by step, arrived at the deterioration of such excellent stock, the original of which exists no longer but in our imagination. Nevertheless, we must take care not to breed from mares of dilapidated constitutions, worn out by work. Nothing is better for mares kept for breeding than the work they get out in the open fields. The intelligent farmer may, in this way, breed from mares up to their twentieth year. Not only can the mare do work during gestation, but does so both to her own and her offspring's welfare; and the success of the breeder will be the greater as he proportions the feed of the mare to her work. This, well ordered, it is that constitutes the whole mystery of breeding the domestic horse."

Our aim is to develop the utmost strength and celerity of which a horse is capable; and it is by well-regulated exercise that these

two qualities are developed. Exercise produces suppleness in a horse, and strength and endurance under the severest trials and the most laborious work. Nothing is so contrary to the horse's nature, destined as he is for exertion, as lengthened and continuous rest. With a view of setting forth the indispensable necessity of exercise for horses, it will be as well to enumerate the inconveniences resulting from want of exercise.

First, prolonged repose in the stable favours in the animal the plastic process. His fibres become distended, the cellular tissue surcharged with fat, insomuch that the whole body grows weak in proportion as it grows bulky, and in a short time becomes a spongy mass, lacking altogether energy and vigour. In such a condition the horse proves a burthen to himself.

Secondly, the muscular system grows weak not only in proportion to the relaxation of its fibre and to the softening of the whole body, but, in addition as the surcharge of useless fat incommodates in particular the extensor muscles in their movements, which succumb under the weight of fat; and thus it is that we see horses over-fed and under-worked become short-steppers, foundered, &c.

Thirdly, the over-fat horse not only becomes soon fatigued, but in going wears his legs out faster, and, above all, does mischief to his feet. Having an enormous weight to carry, the hoof spreads and undergoes various deformities, more or less remarkable according to its nature; such deformities being always slow, frequently difficult of removal, and such as keep the horse for a greater or less time out of work.

Fourthly, for want of exercise the wind grows short, accumulation of fat in the cavity of the chest being opposed to a free expansion of the lungs. This likewise detracts from the speed of the horse, and from his power of enduring fatigue.

Fifthly, excessive *embonpoint* impedes the freedom of respiration, and tends to the formation within the body of carbon. And this accumulation, favoured by a tardy respiration, becomes the occasion of renewed deposit of fat; and since, at the same time, the blood becomes thick, it is considered as the source in animals in general of many maladies.

Sixthly, inaction weakens the digestive functions. Horses that have too little exercise are more subject than others to colics and indigestions.

Seventhly, the general circulation of liquids penetrating the tissues becoming more tardy, the consequence is a disproportion between venous and arterial blood. The more sluggish respiration grows the less arterial blood is made; and while the blood engorges the veins it becomes surcharged with carbon, as is evinced by its

deeper hue. Again, a slackened circulation becomes the occasion of œdematous swellings in the limbs, windgalls, &c.; and these are observed to disappear in the ratio in which exercise is enforced.

Eighthly, inaction augments the sensibility of the skin. It becomes relaxed, and the animal, in consequence, is rendered more susceptible of external influences.

Ninthly, long sojourn in the stable notably affects the vision.

Tenthly, the horse neglected to be exercised grows indocile, and especially so should he be young. Through idleness he contracts all sorts of bad habits in the stable; he rubs himself, crib-bites, kicks, &c.

All these inconveniences disappear under suitable and sufficient exercise. Exercise it is that determines the strength of the muscles, the assimilation and absorption of the juices. It has a tendency to enlarge the cavity of the chest, by rendering respiration more easy of performance; and it checks excess of fat, by favouring transpiration; making good the saying of the groom, that exercise is as good as a dose of physic. In a word, exercise and labour constitute the best preparative for fecundity, at the same time that it insures health and longevity.

Notwithstanding that exercise exerts great and wholesome influence upon the horse, such advantage cannot be insured but under such conditions as the following:—

1. Providing the exercise be judiciously apportioned to the strength of the horse.
2. Providing the exercise be of a kind suitable to his nature.
3. Providing every requisite attention be paid him after exercise.

That which is especially hurtful is the *excess*, whether it be of food or of work. It is into the effects of over-fatigue that it is our business now to inquire.

Every over-worked animal wears out the faster. Frequently, a single act of brutal or inhuman treatment is sufficient to ruin a good horse for ever, especially one of an ardent temperament.

Violent exercise, urging the animal beyond his powers, tends,

1. To over-excite the muscular power, and that, directly influencing the organic life, causes quicker expenditure of the vital energy.

2. To abate to too great a degree the plastic power. Muscular strength may be lowered to that degree that repose even and improved feeding become insufficient to recover it, whence results exhaustion of the entire organism.

3. To diminish the suppleness and pliancy of the locomotive levers. In proportion as the muscles become stiff from over-exertion, the sinews grow relaxed, and the joints in the end anchy-

losed. The synovia so necessary to preserve their flexibility becomes diminished and dried up. A certain inter-articular cre-pitation is heard indicative of such dryness. The step of such animal is infirm, and he is but too often found stumbling. Broken knees, lamenesses, abnormities of every kind, follow in quick succession, appearing exteriorly in the form of windgalls, curbs, exostoses, spavins, &c.

4. To augment the number of inspirations by hurrying the natural breathing. The inspirations which, in a state of repose in a horse in health, are from 10 to 12 per minute, become increased to 20 or 30, and during exertion even to the maximum of acceleration as far as 130 per minute. The pulmonary tissue from unnatural dilatation becomes over-stretched and bursts. Rents of its texture follow, and the air escapes into the parenchymatous substance, and thence underneath the pleura. To this we may chiefly attribute the cause of pulmonary emphysema, causing broken-wind, and rendering the animal incapable of work.

5. At the same time it augments the pulsation, raising it from 38 or 40 to 70 or 80, and possibly as high as 140 per minute. From that time the heart takes on gradually proportionate dilatation, while the lungs and large bloodvessels suffer from too sudden affluxes of blood, which, in consequence, is thrown back upon the brain, occasioning congestion. Depôts of blood become established, the decomposition of which hastens the death of the animal, of which every day furnishes us with examples in the dead horses which are brought to our slaughter-houses. We have even seen race-horses fall dead; the state of sur-excitation to which they had been pushed by the striving of their riders, elated at the idea of winning, having given rise to rupture of one of the principal bloodvessels.

In regard to the pernicious effects of excessive labour, we may observe, what does the mischief in particular is the extreme speed at the time that the animal is over-weighted. This is the reason why our cavalry horses wear out quicker than those employed in the artillery service, though the latter work would seem the more exhausting. For a like reason, we see hunters and post-horses wearing less time than such as are worked more hours, but at a diminished pace. Agricultural horses that work from six to eleven o'clock in the morning, and from two to six in the afternoon, and sometimes even more than that, last twice or thrice the time of others.

The use we make of horses being twofold; viz. for speed and for burthen, it is of importance that we should examine upon what in particular the two capabilities depend, which, found united in the same horse, constitute the reason why we give him the preference over others. It likewise behoves us to determine the exact

measure of speed and burthen we can impose upon a horse, so that his exercise or work do not inflict immediate ruin upon him, and that the saddle and the collar do not become to him at once insupportable and destructible.

In observing the influence of exercise on horses in this novel point of view, we find that all muscular action tends to produce efforts whose united powers constitute what in one word we denominate *strength*.

It is not at all times that the efforts of the same horse are equivalent in force; his power will be commensurate, first, with the weight he has to carry; secondly, with the speed he has to go at; thirdly, with the duration of the pace; fourthly, with his breed; fifthly, with the season and the weather, and the state of the ground he goes upon.

First, as to the amount of weight and speed. As attention has already been called to these points in another place (*dans la Reaction Agricole*, Nos. 78 and 79), permit me here, gentlemen, to recall your attention to the principal passages of that article.

The exercise we impose on a horse ought, in general, to be so rated that his strength may counterbalance the exertions we require of him. The weight to be carried, or the load to be drawn, it is that first calls forth the animal's strength, and constitutes the labour he has to perform. Although in appearance he may possess greater strength for the saddle than for draft, that, in reality, is no hindrance to him to acquiring the power of drawing to a greater amount than he is able to carry. The burthen intended to be placed upon the back, however, ought to be estimated according to the animal's *natural strength*, the same as science has established the rule in regard to man.

As a mean, a man will support without exhaustion two-fifths of his own weight: i. e. the individual who weighs sixty-two kilogrammes and a-half, will be able to carry easily a weight of twenty-five kilogrammes. Now, since a horse weighs about four times as much as a man, it follows that the former, weighing 250 kilogrammes, should carry a weight of 100 kilogrammes. This calculation is taken as a mean, to serve us as a *datum* in estimating the proportion the burthen ought to bear to the physical strength of the animal, as well as to the rate of speed at which he is to go; and, again, between horses of different ages, sexes, breeds, form, &c.

We know very well that the mean we have fixed is capable of considerable augmentation, the same with men as with animals, who, once exercised at an early age and with judgment, acquire capabilities truly astounding.

Man, in this particular, possesses advantages over the horse.

The vertical position of our dorsal column enables us to resist with more ease than the horse, whose spine is horizontal, a burthen beyond our strength. A well-made man, by dint of exercise, soon becomes able to carry thrice his rated weight, i. e. to lift and carry with ease seventy-five kilogrammes, while there are but few horses who could for any length of time support 250 kilogrammes. But in regard to the horse, his inability in this respect is the more to be considered, since he has not only to support his burthen, but at more or less speed to run along with it.

So long as the animal is standing still his strength is employed solely to counteract the weight upon his back; from the moment, however, he is put in action the theory we have established falls to the ground; for now his strength becomes divided between the resistance demanded by the weight upon him and the exertion required to give him the desired velocity in action. Now, as the expenditure of force is divided, and fatigue consequently augmented, it is required that the burthen should be diminished in the same ratio in which the speed becomes increased.

Here, then, is a point meriting all our attention. If our officers and non-commissioned officers of cavalry were to study this chapter on the statistics and dynamics of the horse, if veterinary surgeons possessed sufficient authority in regiments, if they were consulted on such questions, we should soon discover that the present mode of setting the kit upon our cavalry horses is absurd and ruinous; insomuch that to men conversant in such affairs it is no matter of surprise that the cavalry horses in France fail in such numbers: the fact being, that while such horses are compelled to move at a more rapid pace than others, they have to carry a disproportionate burthen, and this breaks them down. In France, the loss of the cavalry amounts yearly to one horse in eight, while in Prussia and Austria, and elsewhere, the loss is no higher than one in thirty. If the troop horse endures longer in Germany than in France, it is because the Germans, who have a practice of trying horses under different equipments with a view of ascertaining what amount of burthen they are able properly to perform under, scrupulously avoid over-weighting the animal. In France, on the contrary, the burthen of the war-horse is augmented according as the campaign grows long and laborious. Have we not seen founder spreading in a short time over our Algerian cavalry? And in reflecting upon it, could it be expected otherwise with horses weak and ill-bred, little accustomed to privations, launched into deserts, shelterless, and without resources? Under such circumstances as these, compelling horses to carry with them from eight to fifteen days' provisions, to say nothing about their equipment for battle, was to impel them to certain destruction.

Over-weighting a horse that has to perform rapid movements checks his respiration, while it occasions the double inconvenience of causing the saddle to shift easily, by which the back becomes liable to injury, and of forcing the animal to occupy more space than he ought in the ranks. Is it not ridiculous to behold our hus-sars, instead of piling the whole of their kit behind the saddle, upon parts which by nature are the strongest, compelled, in compliance with a stupid regulation, to make a heap of it upon the withers, and to overload the horse's shoulders; parts which require every easement, unless we would expose the rider to inevitable falling? This is one of the imperfections in our cavalry which has existed even from the time of Louis XV, and which the Comte de Montfort, field-marshal and inspector of light troops, disclosed in speaking of the French cavalry in his excellent *Traité de Cavalerie*, published in 1786. What he says is this (p. 16):—"Cavalry horses are wantonly sacrificed, because hardly any regiments, hitherto, have understood rightly the advantage of placing their kits upon the croups of their horses."

Let us now endeavour to establish a mean between burthen and speed. According to the researches of M. Gerstner on this subject, it follows that,

200 lbs. of burthen	are equivalent to a speed of =	feet.
150 lbs. of ditto to a ditto of =	2 do.
100 lbs. of ditto to a ditto of =	4 do.
50 lbs. of ditto to a ditto of =	6 do.
0 lbs. of ditto to a ditto of =	8 do.

This is to say, that the mean strength of a horse is as equal to maintain 200 lbs. while standing as it is to make an effort of speed of the extent of 8 feet, freed from all burthen; whence we may deduce the corollary, that the mode of making a calculation between weight and speed consists in reckoning an expenditure of 100 lbs. of strength to effect a movement embracing 4 feet of distance: it being unnecessary to add, that the more favourable the circumstances for the employment of such strength, the higher may this assumed mean be rated. If we admit that such mean may be tripled, both as respects the burthen and the speed, we may conclude that the farming horse is equal to the burthen, without any excessive fatigue, of 600 lbs.

In respect to man, 10 lbs. of burthen is equivalent to 1 foot of cleared space; in the horse, 50 lbs. are equivalent to a distance of 2 feet, or, if we like, 25 lbs. are equivalent to 1 foot of speed; i. e. to clear 1 foot of space the horse has to make an effort equivalent to an expenditure of strength caused by 25 lbs. of burthen.

At a walk, a movement of 4 feet of speed (or distance)	
is equivalent to	100 lbs. of burthen
At a gentle trot	of 8 feet to 200 lbs. of burthen
At a swinging trot	of 12 feet to 300 lbs. of burthen
At a gallop.....	of 16 feet to 400 lbs. of burthen
At a swinging gallop.....	of 20 feet to 500 lbs. of burthen
At a racing pace	of 24 feet to 600 lbs. of burthen

As strength is the originator of speed, so also it has relation to the weight of the body. Therefore it follows, from the example above given, that a horse carrying a weight of 500 lbs. requires, to transport it the distance of a foot, to make an effort equivalent to 25 lbs. about a twentieth of his own weight; we may also admit, as a general rule, that the expenditure of a horse's strength calls for the twentieth of the weight of his body for every foot of speed or distance.

In order, therefore, to determine in a horse of ordinary work the ratio of speed to weight super-imposed, we will take the calculation made for a moderate-sized saddle horse, whose strength does not ordinarily extend beyond the limit of from 200 to 600 lbs. weight, and so, according to what has been laid down, we may conclude that, on an average, the horse who expends his strength equivalent to 100 lbs. of weight, to clear a space of 4 feet at a step, will not make such movement with facility should the weight of his burthen exceed 100 lbs.; and therefore that, mounted by a dragoon whose weight may be estimated with his arms and baggage at 200 lbs., the same horse will have to carry a weight equal to 300 lbs., one to which he may for a sufficiently long time oppose resistance by going but at a foot pace.

Put into a gentle trot equivalent to 8 feet of speed = 200 lbs., the horse will have to exert himself under a burthen of 125 lbs., which on his part will require a force = 425 lbs.; so that the animal with a weight of 200 lbs. = 500 lbs. of expended strength will not be able to resist such a trial beyond a very moderate continuance of exertion.

The gallop, or sixteen feet of speed = 400 lbs. of expended strength, occasions the same fatigue as 525 lbs. of burthen. The same horse loaded to the extent of 200 lbs. = 600 lbs. of expenditure of strength, which is the maximum, soon succumbs from exhaustion.

The full gallop, the hunting or dispatch gallop, or twenty feet of speed = 500 lbs. of strength, does not permit the burthen being carried beyond 100 lbs. weight; and when we come to *the race*, calculated, as it is, at the 24 feet of speed = 600 lbs. of expended strength, that excludes, as it were, all burthen; since, to make an effort equivalent to a space of 24 feet, the horse is compelled to expend the maximum of his strength.

* Extracts from Domestic Journals.

THE NATURAL HISTORY AND ORIGIN OF DOGS.

[From the North British Review, No. xiii.]

BARON Cuvier has characterised our reduction of the dog from a state of nature as “la conquête la plus complète, la plus singulière, et la plus utile que l’homme ait faite*,” and Mr. Swainson has accused Baron Cuvier of scepticism and infidelity for so doing†. The English Naturalist quotes the preceding sentence and the following:—“Les petits chiens d’appartemens, *Doguins, Epagneuls, Bichons*, &c., sont les produits les plus dégénérés, et les marques les plus fortes de la puissance que l’homme exerce sur la nature;” and then adds in a note:—“We question whether the scepticism of Buffon, or the infidelity of Lamarck, could have prompted a more objectionable passage.” “What does this mean,” he afterwards resumes, “but that man has the power of conquering natural instincts or dispositions, and of making an animal, originally created savage or ferocious, domestic and familiar, at his own good will and pleasure.” We think it really may mean something of that kind without authorising such serious charges as those brought forward. If our undoubted power over the animal kingdom should possibly increase our satisfaction with ourselves, that is, with our own praiseworthy perseverance and ingenuity, we trust it will also still more increase our admiring gratitude to the Creator both of man and beast, for having endowed the inferior orders with those accommodating instincts which the plastic power of the human race has providentially been enabled so to control, modify, or even transform, as to render them subservient to such various and important uses. When God made man in his own image, he gave him dominion “over every living thing that moveth upon the earth,” and the sway which he has since been enabled to establish, at various times, over various creatures, is merely the exercise of that lordly delegation. Mr. Swainson seems to think that we arrogate too much to ourselves when we refer to such changes, as if they were our own achievement. Now, we maintain that these changes actually are our own achievement, although we admit that we cannot alter the essential nature of things, but can merely modify or divert certain instinctive impulses in such a way as to make them beneficial to ourselves. Certain

* *Regne Animal*, vol. i, p. 149.

† *Classification of Animals*, p. 135.

wild animals are sagacious, swift of foot, keen-scented, persevering, and, as the event has shewn, capable of strong and enduring attachment to mankind. The result of their own good qualities, when acted on by our kindness, is domestication. But is a wolf not by nature "savage or ferocious?" Has a dog not become "domestic and familiar?" And is the difference between the two not of man's achievement? Suppose Mr. Swainson was pursuing his avocations as a field naturalist, "at his own good will and pleasure," and was overtaken by a pack of well-trained fox hounds, he would fare none the worse for such encounter. But suppose that he chanced to be out rather late some winter evening in the north country, that is to say Lapland, and that he is overtaken by a troop of unreclaimed dogs, in other words wolves, we think he would find himself in a much more painful predicament, and would feel but slightly consoled by his own philosophical reflection, that he was in the presence of creatures "which had been endowed by the Creator with that peculiar instinct of *attaching themselves to man*, defending his person, and guarding his property." Being well read in natural history, he would more likely bring to remembrance, and not without considerable trepidation, the accounts published many years ago in the *Moniteur*, how, during the last campaign of the French army in the territory of Vienna, not only were the outposts frequently molested, but the videttes actually carried off in consequence of these ferocious beasts attaching themselves to man somewhat too closely; and how, on one occasion, when a poor sentinel was sought to be relieved from his appointed post, there was nothing to be found there save a dead wolf, very gaunt and grim, and an exceedingly small portion of a pair of inexpressibles.

We believe that neither the great French naturalist, nor any other naturalist, great or small, denies the providential implanting of a peculiar instinct in all animals which have been domesticated—an instinct capable, under the combined influence of fear and affection, of being strengthened in certain directions and weakened in others; but still the subjugation itself is the actual work of man, and is, in truth, a great achievement. A dog desires to lick your hand, and a wolf your blood; and there is such a decided difference in the nature of the two intentions, that it should be kept carefully in mind by all sensible men, women, and children. We know not whether we can even concede to Mr. Swainson his assertion that there is only a limited number of animals to whom has been given "an innate propensity to live by free choice near the haunts of man, or to submit themselves cheerfully and willingly to his domestication." We believe that innumerable tribes, excluded by Mr. Swainson's category, are

just as capable of domestication as the others, were they worth the trouble; but there are many useless animals in the world, (viewing them, that is, only in their economical relations to ourselves), and these it would assuredly be a waste of labour to reclaim from their natural state, which is that of well-founded fear for the lord of the creation. Besides, it is not the most valuable of our domesticated animals which, in the wild state, live by choice in the vicinity of human habitations, or submit themselves most cheerfully to man's dominion. Neither is it the nature, considered by itself alone, of any creature's attributes which determines its being reduced to the domestic state. The social condition of man himself, and his own advancement in civilization and domestic life, must be likewise taken to account. Ask the North American Indian, as he wanders through leafless woods or over sterile plains or across the snowy surface of frost-bound lakes or crackling rivers, whether the rein-deer, which he may be then tracking in cold and hunger, is capable, like the dog, of domestication. His reply would be, that you might as soon seek to domesticate the grizzly bear or prong-horned antelope. Put the same question to the nomadian of the North of Europe, the forlorn Laplander, and he will tell you (in still greater amazement at your ignorance) that for every domestic purpose there is no such animal on all the earth. It is, therefore, the wildness of man rather than the stubbornness of beast which so frequently interferes with the progress of domestication. "For every kind of beasts, and of birds, and of serpents, and of things in the sea, is tamed, and hath been tamed of mankind: But the tongue can no man tame." *James iii, 7*. And this last statement, from a source which none can gainsay, no doubt accounts for the fact that one naturalist should abuse another without sufficient reason*.

* We shall not take upon us to question Mr. Swainson's scholarship, or doubt his clear comprehension of the passages he reprehends. But in his own discourse on the "Classification of Quadrupeds," p. 15, where he takes occasion to state the characters which distinguish animals and plants, we find the following passage:—"Vegetables derive their nutriment from the *sun*, and from the circumfluent atmosphere, in the form of water, which is a combination of oxygen and hydrogen; of air containing oxygen and azote; and of carbonic acid, composed of oxygen and carbon." Now, the meaning of this is by no means clear, or rather it is very clear that it has no meaning at all. As a general reference is made to one of Cuvier's works as the source of this extraordinary piece of physiology, we glanced over the Introduction to the "*Règne Animal*," and soon found as follows:—"Le *sol* et l'atmosphère présentent aux végétaux pour leur nutrition de l'eau, qui se compose d'oxygène et d'hydrogène, de l'air qui contient de l'oxygène et de l'azote; et de l'acide carbonique que est une combinaison d'oxygène et de carbone." p. 20. Now, we are ready to maintain that, although *sol*, during fine weather, is very fair *latin* for sun, it is certainly not French for any thing half so lustrous, but, in

Mr. Swainson states his surprise (in *loc. cit.*) that any one should countenance the assertion of those sceptical writers who "term this wonderful instinct the *work of man*." In this we conceive lies his misconception of the whole matter. He seems to think that the writers whom he criticises assert that man has formed the peculiar instincts of certain species; whereas these writers, whether right or wrong, merely maintain that the human race has taken advantage of such instincts, and by control and cultivation has turned them to its own advantage. What is the natural portion of instinct in the procedure of the pointer dog? Surely this, that when it has scented the game it stands still for a time warily, and then advances with greater caution, that it may eventually spring upon and secure it *for itself*. What is the acquired or artificial portion? That steady, sedate, and "self-denying ordinance," which directs it to indicate the existence and position of the game, or, if encouraged, cautiously to lead towards it, that it may be slaughtered by and for *its master*. The former delay is a mere piece of instinctive prudence, that the quadruped may spring at last upon its prey with more unerring aim,—the latter is a conventional indication to the biped who carries the gun, that it is now his business to conclude the work. This conversion, under man's guidance, of a momentary pause to a full stop, has been typographically compared to the changing of a semicolon to a *point*.

We believe it was Buffon who first broached the notion that the shepherd's dog is that which approaches nearest to the primitive race, since in all countries inhabited by savages, or men half-civilized, the dogs resemble this breed more than any other.

"If we also consider," he observes, "that this dog, notwithstanding his ugliness, and his wild and melancholy look, is still superior in instinct to all others,—that he has a decided character in which education has no share,—that he is the only kind born as it were already trained—that, guided by natural powers alone, he applies himself to the care of our flocks, which he executes with singular

the latter language, means simply *soil*, or "mother earth," and not the god of day. The passage, of course, signifies that earth and atmosphere furnish food for vegetation by means *of water*, which is composed of oxygen and hydrogen,—*of air*, which contains oxygen and azote,—and *of carbonic acid*, which is a combination of oxygen and carbon. We observe, that in a concluding Note (p. 16), Mr. Swainson states, "as it might be thought objectionable, in a popular work of this nature, to quote foreign authors in their own language, we have, upon this and other occasions, cited Mr. Griffith's translation of the *Règne Animal*, rather than the original." Mr. S. might surely, with no loss of popularity, have given us a correct translation of his own, without quoting either a foreign language or an unintelligible version by another person; and this would have been a proper and praiseworthy way of using books without abusing them.

fidelity,—that he conducts them with an admirable intelligence which has not been communicated to him,—that his talents astonish at the same time that they give repose to his master, while it requires much time and trouble to instruct other dogs for the purposes to which they are destined ;—if we reflect on these facts, we shall be confirmed in the opinion, that the shepherd's dog is the true dog of nature,—the dog that has been bestowed upon us on account of his greatest utility ; that he bears the greatest relationship to the general order of animated beings, which have mutual need of each other's assistance ; that he is, in short, the one we ought to look upon as the stock and model of the whole species*."

We admire shepherds, and shepherds' dogs, and sheep, and take great delight in the "pastoral melancholy" of lonesome treeless valleys, whether green or gray (alternate stony streams, the beds of winter torrents, and verdurous sloping sweeps of brighter pasture), resounding with the varied bleating of the woolly people ; but as we know that there are many countries without either sheep or shepherds, yet abounding in dogs of so wild and uncultivated a nature that they would far rather worry mutton on their own account than watch it on account of others, we cannot admit the foregoing explanation to be true. The fact is, that so long as we seek with Buffon for the origin of *all* domestic dogs in a *single* source, we shall seek in vain. Their widely diversified nature and attributes cannot be explained or accounted for by the influence of climate and the modifying effects of domestication—however various and important these may be—acting on the descendants of only *one* original species.

Pallas, a German naturalist, long settled in Russia, was among the first to give currency to the opinion, that the dog, viewed in its generality, ought to be regarded in a great measure as an adventitious animal, that is to say, as a creature produced by the diversified, and, in some cases, fortuitous alliance of several natural species. This idea is now a prevailing one, and we certainly give to it our own assent. An excellent English naturalist, Mr. Bell (in his recent "History of British Quadrupeds"), adheres to the older notion, that *the* wolf is the original stock from which all our domesticated dogs have been derived. There are many wolves in this world, and several very savage ones in America, and on an enlarged view of the subject it might be difficult to choose impartially among them, although the dogs of the western regions may be thought entitled to claim descent from their own wolves, to the same extent as ours may from those of Europe. Now as wild species of the Old and New World are deemed distinct by

* Histoire des Quadrupèdes, tom. i, p. 204.

the majority of naturalists, and as each of those great divisions of the globe gives us more than a single wolf, we start in this way with a somewhat complex paternity from the beginning.

There are many wild dogs, strictly so called, of very different character and conduct in various countries, but none of them, even after centuries of freedom (supposing that they are only *emancipated* varieties), have reverted to the wolfish state. The true pariah dog of India is well known, as a wild species, to be an inhabitant of woody districts, remote from man, among the lower ranges of the Himalaya mountains, where the wolf is likewise known, but with which it does not intermingle in the natural state. If the dhole of India, the buansa of Nepaul, the dingho of New Holland, and the aguaras or wild dogs of South America were neither more nor less than wolves, what prevents their assuming the aspect of their progenitors, seeing that they pass their lives in a state of entire freedom from all control, and unsubjected to the modifying influences of artificial life. Although many wild dogs, commonly so called, may have sprung from the alienated descendants of domesticated kinds, there is no doubt of the existence of species, wild *ab origine*, and more nearly allied to several of our subjugated kinds than is the wolf itself. At the same time, the latter is in one sense a wild dog, and is certainly entitled in that character to be regarded as the stock of more than one domestic breed, at least of the northern parts of Europe and America. But when, after a careful and extended survey of canine species and varieties, we find not only a diversity both of wild and tame species, but a diversity in which the nature and attributes of the domesticated breeds of certain countries in a great measure correspond with the nature and attributes of the unreclaimed animals of those same countries, we are led to consider whether such facts cannot be accounted for rather by a connexion in blood than a mere coincidence. If, for example, Pallas and Guldenstaedt have shewn that the dogs of the Kalmucks scarcely differ in any thing from the jackal, why should we go to the wolf, although it should exist within the natural range of these Northern Asiatics? Still more, if Professor Kretschmer (in Rüppel's *Atlas*), in describing the Frankfort Museum, shews that another jackal (*Canis Anthus*) is the type of one of the dogs of ancient Egypt, and proves not alone from the correspondence of antique figures, both in painting and sculpture, but by the comparison of a skull from the catacombs of Lycopolis, that these creatures so resemble each other as to be almost identical,—why should we refer so exclusively to the muscular wolf as the progenitor of such comparatively feeble forms? Or is it likely, from what we know of other animals, and the limits of variation which Nature has as-

signed even to the most variable species, that the whole of our infinitely diversified tribes of dogs, from the noble and gigantic stag-hound to the useful terrier and degraded pug-dog, have all sprung originally from one and the same blood-thirsty savage? We can scarcely conceive the possibility, and in no way see the necessity of such a parentage.

That the wolf and dog breed freely together had, however, been long ascertained from experiments made in a state of confinement (we can scarcely call it domestication), and that they freely seek each other's society, as belonging to the same kind, has been still more explicitly proved in later years, when at least one of the animals was in a condition of total wildness. During Sir Edward Parry's first voyage (see Supplement to the *Appendix*) frequent instances were observed of more than one dog belonging to the officers being enticed away by she wolves. "In December and January, which are the months in which wolves are in season, a female paid almost daily visits to the neighbourhood of the ships, and remained till she was joined by a setter dog belonging to one of the officers. They were usually together for two or three hours; and as they did not go far away, unless an endeavour was made to approach them, repeated and decided evidence was obtained of the purpose for which they were thus associated. As they became more familiar, the absences of the dog were of longer continuance, until, at length, he did not return, having probably fallen a sacrifice to an encounter with a male wolf. The female, however, continued to visit the ship as before, and enticed a second dog in the same manner, which, after several meetings, returned so severely bitten as to be disabled for many days."

The Esquimaux dogs bear a strong resemblance to the northern wolves, and we do not see how they could have sprung from any other source. "Without entering," says Sir John Richardson, "at all into the question of the origin of the domestic dog, I may state that the resemblance between the wolves and dogs of those Indian nations who still preserve their ancient mode of life continues to be very remarkable, and* it is nowhere more so than at the very northern extremity of the continent, the Esquimaux dogs being not only extremely like the grey wolves of the arctic circle in form and colour, but also nearly equalling them in size*." So great, indeed, was the resemblance between these North American wolves and the sledge-dogs of the natives, that our arctic voyagers frequently mistook a band of the former for the domestic troop of an Indian party. The cry of each is precisely the same. "Ils hurlent plutost qu'ils n'abayent," says Sagard Theodat, in the old

* Fauna Boreali-Americana, p. 75.

French account of Canada (1636); and we may here observe, that the barking of dogs seems a refinement in their language, acquired in consequence of domestication. The dogs of all savage and solitary tribes are remarkable for their taciturnity, although they speedily begin to bark when carried into more thickly peopled countries. The black wolf-dog of the Florida Indians is described by Mr. Bartram as differing in nothing from the wild wolves of the country, except that he possessed the power of barking. A black wolf-dog, sent from Canada to the late Earl of Durham, seemed to combine the characters of the wolf and the original Newfoundland dog.

The Hare Indian dog is a small domestic kind, used chiefly by the Hare Indians, and other tribes who frequent the borders of the Great Bear Lake, and the banks of the Mackenzie River. Sir John Richardson states its resemblance to a wild species called the Prairie Wolf (*Canis latrans* of Say) to be so great, that, on comparing live specimens together, he could detect no difference in form (the cranium is somewhat less in the domesticated kind), nor in the texture of the fur, nor the arrangement of the patches of colour. It seems to bear the same relation to the Prairie wolf that the Esquimaux dog does to the more gigantic grey species. It is very playful and affectionate, easily attached by kindness, but has an insuperable dislike to confinement.

"A young puppy," says the traveller last named, "which I purchased from the Hare Indians, became greatly attached to me; and when about seven months old, ran on the snow by the side of my sledge for nine hundred miles, without suffering from fatigue. During this march it frequently of its own accord carried a small twig or one of my mittens for a mile or two; but although very gentle in its manners, it shewed little aptitude in learning any of the arts which the Newfoundland dogs so speedily acquire of fetching and carrying when ordered. This dog was killed and eaten by an Indian on the Sackatchewan, who pretended that he mistook it for a fox*."

The still more important fact (as bearing on at least one branch of the genealogy of the canine race) mentioned by Captain Back may be kept in mind, that the offspring of the wolf and dog are themselves prolific, and "are prized by the voyagers as beasts of draught, being stronger than the ordinary dog†." "I have seen," says Pallas "at Moscow, about twenty spurious animals from dogs and black wolves. They are for the most part like wolves, except that some carry their tails higher, and have a kind of coarse barking. They multiply among themselves, and some of the whelps

* *Loc. cit.*, p. 80.

† Back's *Narrative*, Appendix, p. 492.

are greyish rusty, or even of the whitish hue of the arctic wolves*." The variation of colour of the wolf in the wild state is worthy of remark. The most frequent among the Pyrenees is entirely black. It is called *lobo* in Spain, and is so like a huge ferocious dog, that many regard it as a hybrid or mixed breed. Lewis and Clark inform us that the wolves of the Missouri are of every shade, from a grey or blackish brown to a cream-coloured white. In Canada, and further north, they are often seen entirely white. In the fur countries they are sometimes noticed with black patches, that is, *pied*, but associated with those of the ordinary grey colour; and Sir John Richardson, on one occasion, observed five young wolves, apparently belonging to the same litter (they were leaping and tumbling over each other as if in play), of which one was *pied*, another entirely black, the rest grey. Now, this natural range of colour is a circumstance of considerable importance in respect to our present inquiry, in as far as the tendency to become white at one extremity of the series and black at the other, combined with the central or representative hue, which is brown, may be said to supply the three great elementary colours of all the races of domestic dogs. We have not the slightest doubt that the wolf is the progenitor of many of our northern kinds.

But in regard to many of the southern sorts the case is different. We believe it to be the opinion of the best instructed naturalists, that the wolf (*Canis lupus*) does not occur at all to the south of the equator. There are wild dogs of a wolfish character in India, beyond the Crishna, and there are corresponding or representative kinds in South America, and even in New Holland; but the wolf itself is wanting beyond the Line, and, in truth, is not required.

It is well known that both wild and tame dogs are indigenous to South America, although wolves, properly so called, do not occur there. The native languages designate the former kinds by names which are not found in European tongues. To this day the word *auri*, mentioned by Herera more than 300 years ago, occurs in the Maypure language.

The largest wild animal of the canine race in South America is the maned aguara—*Canis jubatus*. It is not found to the north of the equator, but occurs chiefly in the swampy and more open regions of Paraguay, and the bushy plains of Campos Geraes. Its habits are solitary. It swims with great facility and hunts by scent; feeding on small game, aquatic animals, &c.

"The aguara guazu," for such is its native name, "is not a dangerous animal, being much less daring than the wolves of the north; it is harmless to cattle: and the opinion commonly held in Para-

* Letter to Pennant, in *Arctic Zoology*, vol. i, p. 42.

guay, that beef cannot be digested by its stomach, was in some measure verified by Dr. Parlet, who found, by experiments made upon a captive animal, that it rejected the raw flesh after deglutition, and only retained it when boiled. Kind treatment to this individual did not produce confidence or familiarity even with dogs. Its sight was not strong in the glare of day; it retired to rest at ten in the morning, and again about midnight. In the dark the eyes sometimes shone like those of a true wolf. When let loose the animal refused to acknowledge command, and would avoid being taken till driven into a corner, where it lay couched until grasped by the hand, without offering further resistance. The aguara guazu, though not hunted, is exceedingly distrustful, and, having an excellent scent and acute hearing, is always enabled to keep at a distance from man; and though often seen, is but seldom within reach of the gun. The female litters in the month of August, having three or four whelps. Its voice consists in a loud and repeated drawling cry, sounding like a-gou-ā-ā-ā, which is heard to a considerable distance*."

We may here state the well-established fact, that canine animals do not bark at all in the natural state; they only howl. Barking is a habit; we shall not say whether good or bad—it probably has both advantages and drawbacks—acquired under artificial circumstances, and by no means natural. Even domestic dogs run wild speedily cease to bark, and take rather to a sharp prolonged howling; while, *vice versâ*, the silent species of barbarous or semi-civilized nations ere long acquire the bark of our domesticated kinds, and, like many other creatures of a higher class, become so conceited of their new attainments, as not seldom to give tongue most vociferously when they ought to hold their peace.

The unreclaimed animal above referred to has been called the Aguara wolf, although his head is somewhat smaller than the head of that animal, and its legs are proportionally longer. It is nearly four feet and a-half in length, and stands about twenty-six inches high. But there are other wild species in South America, called Aguara dogs, from their still greater resemblance to the old domesticated kinds of that continent. The latter were no doubt originally derived from the former, although for a long period the native Indians have encouraged the increase of the European breed, which they name *perro*, from the Spanish term. These nations universally admit the descent of their own breed from the wild species of the woods. But within the last thirty or forty years the indigenous domestic dogs have been almost entirely superseded

* Colonel Hamilton Smith, in *Naturalist's Library, Mammalia*, vol. ix, p. 243.

by the European kinds, which, as hunting dogs, are capable of enduring much more fatigue.

It would appear that in the southern parts of South America there are not now any dogs in a truly wild state, and that such as live with the natives are rather scarce than numerous. Captain Fitzroy describes the dog of Patagonia as being equal in size to a large fox-hound, and bearing a general resemblance to the lurcher and shepherd's dog, but with an unprepossessing and very wolfish aspect. They hunt by sight, do not give tongue, but growl and bark when in the act of attacking or being attacked. Those of Terra del Fuego are much smaller, resembling terriers, or a mixture of the fox, shepherd's dog, and terrier. They guard the dwellings of the natives, and bark furiously on the approach of strangers. They are also employed in hunting otters, and in catching wounded or sleeping birds. As they are scarcely ever fed, they supply themselves at low water by dexterously detaching limpets from the rocks, or crunching mussels. During periods of famine, so valuable are dogs in some of the far parts of South America, that, according to Captain Fitzroy, "it is well ascertained that the oldest women of the tribe are sacrificed to the cannibal appetites of their countrymen, rather than destroy a single dog. 'Dogs,' say they, 'catch otters; old women are good for nothing.'" We have known many excellent, and by no means useless, old women.

The absence of wild dogs from the most southern countries of South America is rendered more remarkable by the well-known fact, that a truly wild species, nearly allied to the Aguara dog, though distinct from it, occurs in the Falkland Islands. It is the only native quadruped of that group* (if we except possibly a field mouse), and is known to naturalists under the name of *Canis Antarcticus*. Mr. Darwin believes it to be quite peculiar to that archipelago, although not confined to the western island, as some have supposed. All the seal-hunters, Guachos, and Indians, who have visited these islands, maintain that no such creature is found in any part of South America. Molina, indeed, supposed that it was identical with the *culpeu* of the mainland; but that is assuredly a different species, the *Canis Magellanicus*, brought to this country some years ago by Captain King, from the straits from whence it takes its name, and common in Chili. These Falkland wolves, or wild dogs, were described by Commodore Byron, who noted their tameness and prying disposition—attributes which the sailors, mistaking for fierceness, avoided by taking sudden refuge in the water. To this day their manners remain the same.

* The horses, horned cattle, hogs, and rabbits, though now numerous, have all been originally imported from other countries.

"They have been observed," says Mr. Darwin, "to enter a tent, and actually pull some meat from beneath the head of a sleeping seaman. The Guachos, also, have frequently in the evening killed them, by holding out a piece of meat in one hand, and in the other a knife ready to stick them. As far as I am aware, there is no other instance in any part of the world of so small a mass of broken land, distant from a continent, possessing so large an aboriginal quadruped peculiar to itself. Their numbers have rapidly decreased; they are already banished from that half of the island which lies to the eastward of the neck of land between St. Salvador Bay and Berkley Sound. Within a very few years after these islands shall have become regularly settled, in all probability this creature will be classed with the Dodo, as an animal which has perished from the face of the earth*."

[To be continued.]

THE POINTS OF A GOOD PIG.

[From "The Farmer's Herald."]

I WOULD now desire to caution the reader against being led away by mere *name* in his selection of a pig. A pig may be *called* a *Berkshire* or a *Suffolk*, or any other breed most in estimation, and yet may, in reality, possess none of this valuable blood. The only sure mode by which the buyer will be able to avoid imposition is, to make name always secondary to *points*. If you find a pig possessed of such points of form as are calculated to ensure early maturity and facility of taking flesh, you need care little what it has seemed good to the seller to call him; and remember that no *name* can bestow value upon an animal deficient in the qualities to which I have alluded. The true Berkshire—that possessing a dash of the Chinese and Neapolitan varieties—comes, perhaps, nearer to the desired standard than any other. The chief points which characterise such a pig are the following:—In the first place, sufficient depth of carcass, and such an elongation of body as will ensure a sufficient lateral expansion. Let the loin and breast be broad. The breadth of the former denotes good room for the play of the lungs, and a consequent free and healthy circulation, essential to the thriving and fattening of any animal. The bones should be small, and the joints fine—nothing is more indicative of

* Journal of Researches, &c., p. 194.

high breeding than this; and the legs should be no longer than, when fully fat, would just prevent the animal's belly from trailing upon the ground. The leg is the least profitable portion of the hog, and we, therefore, require no more of it than is absolutely necessary for the support of the rest. See that the feet be firm and sound; that the toes lie well together, and press straightly upon the ground; as also that the *claws* are even, upright, and healthy. The description of head most likely to promise, or rather to be the concomitant of, high breeding, is one not carrying heavy bone, not too flat on the forehead, or possessing a too elongated snout: indeed, the snout should, on the other hand, be short, and the forehead rather convex, recurving upwards; and the ear should be, while pendulous, inclining somewhat forward, and at the same time light and thin. Nor would I have the buyer even to pass over the *carriage* of a pig. If this be dull, heavy, and dejected, I would be disposed to reject him, on suspicion of ill health, if not of some concealed disorder actually existing, or just about to break forth; and there cannot be a more unfavourable symptom than a hung-down slouching head, carried as though it were about to be employed as a fifth leg. Of course, if you are purchasing a fat hog for slaughter, or a sow heavy with young, you are scarcely to look for much sprightliness of deportment; but I am alluding more particularly to the purchase of young stores, the more general, because the more profitable, branch of pig management.

Nor is colour altogether to be lost sight of. In the case of pigs, I would, as in reference to any other description of live stock, prefer those colours which are characteristic of our most esteemed breeds. If the hair be scant, I would look for black, as denoting connexion with the delicate Neapolitan; but if too bare of hair, I would be disposed to apprehend too intimate alliance with that variety, and a consequent want of hardihood that, however unimportant if pork be the object, renders such animals hazardous speculations as stores, from their extreme susceptibility to cold, and consequent liability to disease. If white, and not *too small*, I would like them, as exhibiting connexion with the Chinese. If light or sandy, or red with black marks, I would recognize our favourite Berkshire; and so on with reference to every possible variety of hue. These observations may appear trivial; but I can assure my readers that they are the most important I have yet made, and that the intended pig buyer will find his account in attending to them.

Pigs, &c. By H. D. Richardson.

VETERINARY JURISPRUDENCE.

CROYDON SUMMER ASSIZES, *before Mr. BARON PARKE.*BURFORD *v.* CHRISTOPHER.

THIS was an action to recover a sum of money on a horse warranty, the horse being bought by the plaintiff, who is the well known dealer in the London road, on the 27th of March last, at Durham fair, as sound. The horse was taken charge of by Mr. Burford's man, and before he had had him twenty-four hours he was taken ill; and in spite of all that was done for him in the way of bleeding, poulticing, and fever balls, died on the night of the following Friday or on the morning of Saturday.

The following witnesses were then called to prove the case:—

Mr. W. Shaw (examined by *Mr. Chambers*).—I am servant to Mr. Burford; I was seven years with Mr. Bacon, of New Cross; I go with my master to the fairs; I went to Durham fair with him, and saw the horse now spoken of in Durham town. I saw Mr. Christopher in the fair; he was in the street with the horse. Mr. Burford said, "Has the horse been ill?" He had a cough when I saw him. Mr. Christopher said he would give a warranty with him; I did not hear the price agreed for; I believe it to be £45; I after that left the fair to go to London. I had nine other horses to go with me; I left Durham between one and two in the afternoon. I asked a man to go with me to Darlington; I led the horse bought of defendant; it is seventeen miles from Durham to Darlington; we were six hours on the road; he coughed several times before we got to Darlington; when we got to Darlington took the horse to the King's Head stables: in about half an hour after that he appeared to be ill; staid at Darlington till seven o'clock; next morning we started from Darlington by railway, about eight o'clock; I saw the horse two or three times on the journey. When we got to York he was very ill; staid at York till half-past eight; got to London at half-past seven in the evening to our own stables. I told my master that when at York I found the horse was ill; I took blood from him, and gave him a fever ball and a mash. I told Shotton what I had done. He has the management of the horses. I saw him the next day, but did not notice him. He was a bright bay horse, stood sixteen hands two inches high, with a long tail. He looked fat and in good condition. I asked Mr. Christopher why he had kept him so long? He said he could not get him to eat his meat.

Cross-examined by *Mr. Sergeant Chennell*.—The plaintiff saw the horse on the Friday; I was staying at the Waterloo Inn; I was with Mr. Burford all day on Friday; I saw Mr. Hicke's stable, I

saw the horse trotted out; Mr. Burford had a stick with him, he might have galloped him. Mr. Earl was there with us; he hit him sharply with a stick; my master bought five horses afterwards; he bought ten in Durham. We had four before; we went to Durham and bought them at the fair; bought only ten in the fair. I may know the Angel Inn, but I stopped at the King's Head, kept by Mr. Edie; I took six hours to walk the horse from Durham to Darlington; I stopped at the King's Head; do not know the ostler; I know Mr. Lax; may know the Angel; I did not go near it within one mile. I do not recollect seeing Lax at the fair; was not at Lax's house; did not shew the horse to any one there; did not go through Smeaton; the only stables the horse was in was at Durham, Darlington, York, and my master's. I did not ride him; he coughed several times; it was fine weather and mild on Sunday, but Monday wet; noticed him when at York; saw he had not eaten his corn; did not call in a surgeon; saw him two hours after, and bled him; I saw him at eleven o'clock at night: he would be difficult to match.

By *Mr. Chambers*.—I was with my master when he bought the horse; it was the same; the horses were always left in my care. I have three hundred or four hundred a-year in my care. I did not see my master after I left Durham till I reached home; he paid for the horses coming by railway; I did not pay from York to London.

Mr. John Hall, examined by *Mr. Chambers*.—I live at Sedgefield; I saw the bay horse; I did not want to buy it; I was not present when Mr. Burford bought it. I saw the horse at Northallerton fair, on the 14th of February; the horse had been in a field at Sedgefield; it came running towards me, and, from a grunt or cough, I thought he was affected in the lungs.

Cross-examined by *Mr. Sergeant Chennell*.—There were no other horses in the field at the same time.

William Earl, examined by *Mr. Chambers*.—I live in Yorkshire; was present when plaintiff bought the horse; saw the horse trotted up and down; I heard him cough, but did not mention it; it was no business of mine. I heard the plaintiff ask if the horse had been ill lately, since Northallerton fair; defendant said, "no, he would warrant him sound and all right;" he asked £60 for him. I thought it a "roarer;" did not say so, as it was no business of mine. I was with Mr. Burford at Darlington.

Cross-examined by *Mr. Sergeant Chennell*.—I saw Mr. Christopher this week: did not run after him so that I might know him; he was not pointed out to me; the horse was hit with a stick while running; I thought him unsound. I have sold plaintiff horses; I have known him many years; he has staid at my house; I have not been stopping at his house. I went on Sunday last with him to Gravesend; four or five of us went with him.

By *Mr. Chambers*.—I do not know if we went to Rosherville; I am a stranger in London.

Cross-examined by *Mr. Sergeant Chennell*.—Came up to town by railway; I did not state this action would have been given up if my evidence had not saved them.

By *Mr. Chambers*.—I might have said to Mr. Gibson, "We are all in one case;" very likely I did.

Cross-examined by *Mr. Sergeant Chennell*.—Look and see if you see the defendant in court.

By *Mr. Chambers*.—I have seen the defendant; he was plainly dressed; no one told me it was him when I saw him in Croydon.

Mr. Chennell.—Do you see him in court?

The witness looked stedfastly round the court, and at length exclaimed, "There he is—the same face, but in different clothes." (Laughter.)

William Bramley.—I live at Red Hill, near Nottingham; I saw the horse at the fair, but would not buy him, because he had a cough.

Cross-examined by *Mr. Bovill*.—I was about buying him; I saw him first on the 27th of March, against the Half Moon, in the street. I was there when Mr. Burford struck the horse with the stick. I wanted a good sound horse; I thought I could buy the horse; I saw him in the stable; he coughed then; it was a very unhealthy cough; I thought him a roarer. I have sold Mr. Burford horses. I was at Gravesend on Sunday. Have taken meals at Mr. Burford's house.

William Howley.—I live at the Ship Inn, Durham; I was at the Waterloo Inn; Mr. Christopher was there at the same time. The plaintiff wrote out the warranty for the defendant to sign; he said he could not write, but would warrant the horse sound. [The warranty was put in and read.]

Cross-examined by *Mr. Sergeant Chennell*.—I was at Gravesend on Sunday.

John Shotten (examined by *Mr. Chambers*).—My father keeps livery stables. I am manager to Mr. Burford. I recollect the large bay horse coming from the fair; I found he was ill; I gave him a fever drink; the next day he was worse; I took five or six quarts of blood from him; he got worse: I then called in Mr. Gillingham; he came in the after part of the day; he died in the night or early in the next morning. We have 1000 or 1500 a year, which always come by railway when from a distance.

Cross-examined by *Mr. Sergeant Chennell*.—I saw Mr. Burford the Sunday morning after the fair.

By *Mr. Chambers*.—Mr. Burford considers me competent to manage the horses. I am not a member of the College of Surgeons.

Mr. Gillingham (examined by *Mr. Petersdorf*).—I am a vete-

rinary surgeon in the Borough; was sent for to see the horse on Good Friday; he was very ill. I bled him, took from him three quarts of blood; ordered mustard poultice on his side, and gave him a draught; did not see him again the same day. I was there when the horse was opened; two pails of water came from the chest: the left lobe of the lung was diseased, and three abscesses were formed on it; it had a previous attack of three or four months' standing. I believe this to be the cause of death.

By the Judge.—The abscess could not have formed in six days; I was applied to for a certificate of the death; that is it. (Put in, and read.)

By Mr. Sergeant Chennell.—I have been in court all the time the witnesses have been examined.

Thomas Whately, horse slaughterer.—Has been so for thirty years. I saw the lungs of the horse; they were in an ulcerated state; three abscesses on the left lobe were in a state of corruption.

Cross-examined by *Mr. Bovill.*—The water or matter in the chest was a pink colour; there were about two pailfuls in the chest.

By Mr. Chambers.—There were three or four abscesses on the lungs.

Mr. James Turner, veterinary surgeon, of Regent-street, London, and Croydon.—Has been thirty-five years in practice: the disease was on the horse when sold; it was of long standing.

By Mr. Sergeant Chennell.—The distinct abscesses led me to say it was of long standing; he could not have worked without shewing symptoms of distress; he would have been off his appetite; his cough would increase; his coat look rough. He might have travelled 28 miles at a foot pace, but, if he was trotted, not more than 12 miles. If the disease was chronic, bleeding would be proper. I do not like to purge with aloes: I consider the care and treatment of the horse to have been very good; under the circumstances bleeding was highly proper.

Mr. Gillingham said, his expenses for attending the horse would be two guineas; the keep of the horse for the week he thought was worth one more.

This closed the case for the plaintiff.

Mr. Sergeant Chennell here made a long speech on his case for the defence, and proceeded to call a score of Yorkshiremen, who were witnesses for the defence, some of whom had known the animal from its infancy. It was a long time before one could be found who had heard the horse cough, till they came to the ostler of the Raby Arms, who heard the animal give, as he described it, a good sound healthy cough, rather sharp and deep. This observation caused a deal of laughter, as it was elicited from him by *Mr. Montague Chambers* in his own peculiar manner, which, during

his cross-examinations, set the court in roars of laughter. This was the case with his examinations of the Yorkites to-day. The case lasted some hours, when the jury returned a verdict for the plaintiff.

ARMAGH SUMMER ASSIZES (*Record Court*) *Before Chief Justice Pigott.*

[From "The Ulster Gazette."]

M'SHANE v. CORRIGAN.

THIS was an appeal from the Quarter Sessions of Newtownhamilton. The action was brought to recover the price of a horse that died, from glanders, four weeks after the sale, by defendant, in the horse fair of Keady.

Mr. R. Moore opened the case, and the following witnesses were examined.

Patrick Leggan, examined by *Mr. Ross Moore*.—Lives in Newry; is manager for *Mr. Dargan*, railway contractor; was at Keady fair on 12th March last; knows defendant; travelled with him, on a car, from his house at Camlough to the fair, a distance of seven miles. Corrigan told witness that he had a chestnut horse for sale in the fair; bought a chestnut horse, in the evening, from plaintiff, at Newtownhamilton, on his way home; Corrigan was present in the room when he bought and paid for the horse, and helped to make the bargain; Corrigan did not say at that time that the horse was his own, or that he had any thing to do with him: plaintiff engaged the horse quite sound; it was the same horse he saw in the fair: kept him till Monday morning, when he took him to *Mr. Small*, veterinary surgeon, for examination.

Cross-examined by *Mr. Thomas O'Hagan*.—Took back the horse on Friday; got £10 of his money back, and a promissory note for the balance.

John M'Shane, jun., examined by *Mr. R. Moore*.—Was in Keady fair, and bought a chestnut horse, for his father, from a man called M'Gilly. Corrigan (the defendant) recommended him to buy the horse, and helped to make the bargain; his father sold the same horse to Leggan, who returned him after a few days: the horse was treated well while in his father's keeping: he had a running at the nose.

Cross-examined by *Mr. T. O'Hagan*.—There was no person employed to make an examination of the horse; Smith, a farrier, looked at him as a friend merely; the bargain was made before Smith examined him; no money was paid before the examination. The horse was sold, on that same evening, to Leggan, for £4 more than he cost; he was engaged sound: on Monday the horse was returned; had not the horse over a fortnight, after he was returned

by Leggan, till he died; witness wanted to barter the same horse at Newtownhamilton fair to Corrigan; saw M'Gilly there; did not ask him to take back the horse, owing to its being unsound; got back the horse from Leggan on the 16th, but did not offer to return him to M'Gilly till the 24th: about that time discovered that the horse was Corrigan's; Smith, the farrier, said that the horse had cataract his eye, and after that the sale was made to Leggan. A warranty was given: we had him two days at ploughing; he fell into a drain; his leg at the hock joint, after this, became swollen: he died about the last day of March.

Joseph Brown examined.—Saw the horse; believes he was unsound; it was a week after the fair of Keady when he saw him; he lived for nine or ten days after.

Thomas Irwin.—Saw the horse both alive and dead; he was in a state of corruption.

John M'Kenna.—Is a horse-shoer; saw the chestnut horse in March last; he was in a bad state of health; saw him opened on the day he died.

Mr. Small examined—Is a veterinary surgeon; examined a chestnut horse, on 15th March, for Mr. Dargan, at the request of Mr. Leggan; was unsound, having glanders, and ophthalmia in the left eye. From the nature of the discharge, and condition of the animal, thinks he must have had the disease at least a month; the disease is dangerous to other horses, and is considered incurable. Swellings of the joints, particularly of the hocks, very often accompany farcy and glanders; the swelling described of the hock joint is more likely to have arisen from the former disease than from an injury by falling into a drain.

The decree was confirmed, with costs.

THE VETERINARIAN, SEPTEMBER 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

AFTER all that has passed; reviewing all the circumstances connected with the obtainment and working of the existing veterinary Charter, and comparing them with the efforts which are now being made, and in so far as getting up a petition for a second Charter goes have succeeded—after all this retrospection, we repeat, the more we seriously reflect on matters the stronger is our conviction

that our incorporated body stands fast, not to be shaken. Still, while the petition for a second veterinary charter is lying dormant upon the shelf in the Home Office, and pending any answer being returned to it, we may be permitted to make a few cursory remarks on the assumed grounds on which the "application" in question is being made. We say *assumed* or *presumed*, because we do not profess to know the precise burthen of the said petition. All we know is, that the present petitioning parties on a former occasion held conference with the Veterinary Council, and that such conference resulted in the suggestion of certain "alterations" being made in the existing Charter, to which corresponding "objections" were opposed, and that both the "alterations" and "objections" were duly forwarded to the Home Office.

Now, allowing the petitioning parties credit for having duly weighed and considered the provisions of the present Charter before they ventured to suggest "alterations" in it, it would be uncharitable—nay, unreasonable—to suppose, whatever amendments in consequence of the objections of Council they may or may not have made in their aforesaid "alterations," that they had departed from the *spirit* or *substance* of them; and this we find to be—though the alterations themselves are eleven or more in number—compressible into two propositions:—one being, that the lecturers or teachers at the veterinary schools should, as formerly, enjoy the privilege of examining and passing their own pupils; the other, that the right of self-government conferred on the members of the profession by the existing Charter should be by them surrendered into the hands of a supervising and controlling "Board," composed almost exclusively of unprofessional persons.

Some fifty years ago, while yet veterinary science was but dawning in our country, and when it had but few followers, and among them hardly any that were competent to undertake such an office as that of veterinary examiner, the lecturers on the science had no other resource but to call in the aid of lecturers on human medicine, and, conjointly with them, to examine their own pupils. And though, under such college *regime* the science underwent improvement, and many a "duly qualified" student was sent forth who in after years reflected credit upon his teachers; yet, at the same time, were hosts of other students emancipated as

“duly qualified” too, who, when they arrived at their several destinations in the country, became quite a laughing-stock to the very farriers who were there in practice before them, and whom they were sent expressly to supplant, to say nothing of their being, from lack of education, totally unfitted for the society of medical men. Persons who were hardly able to pen the letters composing their own names, even had they been acquainted with the orthography of them—grooms, livery-servants in their masters’ liveries, men from the plough-tail, shop-boys who had never looked at a horse before in their lives, in fine, out-of-elbow educationless worthies of every grade and denomination, all, all flocked to the Veterinary College, and all at periods miraculously short returned home with their “diplomas” in their pockets, certifying that they were “duly qualified to practise the veterinary art!” And this is the state of affairs to which we are invited, nay, “prayed” to return!

But how has the Charter affected all this? Among other changes of import it has, by extending and heightening the boundaries by which a veterinary diploma is properly surrounded, already accomplished an important reform in the education of the student of the veterinary art, and this it has effected against every and the utmost opposition on the part of the schools. Neither the uneducated nor the unqualified candidate will find the door of admission into the corporate body open to *him*. Under the supervision of the Council, veterinary examinations are conducted by men, both of the medical and veterinary profession, of established reputation and capability; and this is a state of affairs which the more it is probed the sounder it will be found at bottom, and which in due season will be found to yield fruits of a very different character from such as have grown up under that obsolete *regime* to which the Agricultural Societies, urged on by the veterinary colleges, would have us return. If any body—if, indeed, the Home Secretary—entertains any doubt about the matter, let him at once institute inquiry—let him, we repeat, take every means fairly to probe the matter to the very bottom; and we say, again and again, that, constituted as the present Board of Examiners is, and pursuing the systematic course in which—in accordance with rules laid down for their own guidance by the College of Surgeons—they are now

carrying on the examinations, the system of education cannot fail to become so much improved that, in the natural course of events, veterinary science will actually have to date the commencement of an era of reform from the grant of the existing Charter.

On the subject of corporate government, or that which in the best sense is called *representative*, one on which we have already taken occasion to make some remarks, we need here say no more than, so far as the Charter has yet been tried, let those who are opposed to such wholesome legislation state the *grounds* of their objection. One thing appears certain, and that is, if we are incapable of managing our own affairs ourselves there is little chance of their being properly managed for us by persons who, from their being out of the profession, must necessarily know so much less about them. And if these latter, or any of our opponents, can prove mismanagement, let them come forward, we say, and make their charges. Let not, in either case, the Home Secretary be deceived. And, above all, let him not suppose that we are tame enough to surrender our rights and privileges, for no earthly reason whatever, into the hands of a board of unprofessional comptrollers.

While we are writing in this defensive strain on our Charter we are reminded that such fruits have not grown out of it without due working—without, indeed, a good amount of labour and time bestowed upon it; and for this reason it is we feel how much we are indebted for all that has been accomplished to our unpaid, upright, never-tiring Council; and though to all and every member of Council we are bound to acknowledge a debt of thanks and gratitude, yet is there one presiding over their sittings, ever in his “chair,” and ever vigilant and anxious about every thing and every body concerned, whom, notwithstanding we have had cause before favourably to mention, we feel we ought on such an occasion as this—while we are shewing how well and how successfully our Charter has worked—in an especial manner to bring before the veterinary public. It is needless to say the individual in our mind’s eye is Mr. Thomas Turner, the present President of the Royal College of Veterinary Surgeons. He it was who was very

mainly instrumental in obtaining the Charter; he it is who has, night and day, looked to the working of it; and he is the individual to whom veterinary science and its professors owe a debt which both they and it will one day see the common justice of acknowledging. For the four years veterinary surgeons have been incorporated has he sat as their President; and, though no one who has had an opportunity of knowing to what trials his mind and temper have been subjected during those four years has envied him his elevated position, yet has he manfully fought the good fight—we hope we may say—*out*, and still triumphantly presides over the Royal College of Veterinary Surgeons. To say nothing of the ability and tact Mr. Turner has displayed on the many occasions in which his presidentship has called him into office and action—and which coming from us might appear to have motive—it may afford some evidence of the amount of time and labour he has devoted to his function, when we aver that no board of examination has assembled without his presence, nor any council sat—as our “reports” prove—without the chair being occupied by himself; in addition to which we may mention the facts of his having enrolled himself as a *governor* (not a mere member) of the Royal Agricultural Society, and lately become a member of the Farmers’ Club; and all, we sincerely and conscientiously believe, to the end that he may the better serve the existing interests of veterinary science.

“Vilius argentum auro, virtutibus aurum.”

MISCELLANEA.

SPORTING READINGS.

“IN former times, when the anatomy of the stag was better (?) understood than it is at present, hunters found a small cross-shaped bone in the stag’s heart, which possessed many medical virtues, but which has not been discovered in the heart of any modern stag. That you may form a just estimate of the loss we sustain in not being able to discover *la croix du cerf*, I shall enumerate a few of

its miraculous powers. It alleviated the pains of child-birth, and diseases of the heart, procured a new supply of teeth in old age, and even enabled the possessor to discover stolen goods. It is ten thousand pities it is gone astray."

"A friend of mine, who possesses an extensive deer park, and is a thorough-bred gnostic, gave me the following account of the mode adopted by his keeper to preserve the finest fawns for his table. As soon as the fawn is dropped the cruel keeper cuts its little feet in such a way that the poor creature cannot stand upon them without inconvenience. The doe, finding it unable to move, redoubles her attention, nurses it with great solicitude, and pampers it with milk until it grows into an unmixed lump of fat, without either lean or bone to it, and is, as my friend expresses it, 'exquisitely delicious.' I ventured to condemn the practice as 'cruel,' at which he laughed immoderately, assuring me that Mrs. M. often expressed the same opinion, but was then so fond of fawn that she never even hinted at the cruelty, and rather encouraged the keeper in his heartless proceeding."

ACCOUNT OF STOCK SOLD IN SMITHFIELD.

"The amount of live stock sold at Smithfield in the last nine years, as given in the subjoined table, will afford some idea of the great value of a portion only of the domestic animals of our country (*Johnson and Shaw's Farmers' Almanac*, vol. ii, p. 216):—

	Beasts.	Sheep and Lambs.	Calves.	Pigs.
1835	172,919	1,647,316	24,853	43,134
1836	158,438	897,068	22,981	34,224
1837	179,761	1,540,666	20,259	36,325
1838	183,617	1,467,574	15,705	45,283
1839	188,535	1,464,383	18,576	51,740
1840	180,041	1,521,093	14,194	50,314
1841	175,318	1,444,597	16,287	50,461
1842	188,157	1,636,826	19,296	39,213
1843	188,268	1,854,320	18,876	36,320

"And if the public are, generally speaking, but little acquainted with the value of these noble races of domestic animals, to a still greater extent are they unacquainted with the amount of the annual mortality which, through neglect or ill-treatment of their diseases, or the incurable nature of them, so materially thins the ranks of these invaluable tenants of the farmers' lands. As information on this head can hardly be too much diffused, in order to excite still greater exertions towards the prevention of so great a national loss, I will here collect together a few facts from my note-book bearing on the question.

“According to Mr. Youatt (‘Cattle’ p. 2), one-tenth of all the lambs and sheep of our island die annually of disease; of cattle one-fifteenth of their number die annually by inflammatory fever and milk fever, red-water, hoose, and diarrhœa. Of the great amount of property thus lost, of which very few persons are aware, he gives the following calculation:—‘160,000 head of cattle are sold in Smithfield alone, without including calves or the dead market—the carcasses sent up from various parts of the country. If we reckon this to be a tenth part of the cattle slaughtered in the United Kingdom, it follows that 1,600,000 cattle are sent to the butcher every year, and, averaging the life of the ox or the cow at five years, the value of British cattle, estimated at £10 per head, will be £80,000,000 sterling. 1,200,000 sheep, 36,000 pigs, and 18,000 calves are also sent to Smithfield in the course of a year, and if we reckon these to be one-tenth of the whole number, and allow only two years as the average duration of the lives of sheep and pigs, and value the calves at £2 10s each, the pigs at £2, and the sheep at £1 10s, we shall arrive at the additional sum of nearly £40,000,000; so that we may safely compute the actual value of cattle, sheep, and swine to be nearly £120,000,000 sterling.’

“If, therefore, one-fifteenth of all the cattle of England are annually lost by disease, more than £5,000,000 worth of cattle thus perish every year, and with these also die of disease about £3,500,000 worth of sheep.”

BOAR HUNTING.

IN the year 1829 there was a boar killed in the forest of Camillon, near Bourbonne-les-Bains, in the Department of Marne, that had ravaged the country for some years. He had destroyed several packs of hounds in the fruitless chase, and fought several bloody battles. He weighed 485 pounds, and had above thirty balls lodged in his body when he fell. The boar takes four or five years to attain his full growth, and lives about thirty years. The sow commences breeding about one year old, breeds but once a year, and generally has from six to ten at a litter. The Marechal de Vauban wrote a treatise on these animals, which he facetiously called his *Cochonerie*. His calculation is, that the posterity of a single sow might, in eleven years, amount to the enormous number of 434, 833!

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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

[Continued from p. 487.]

PATHOLOGY OF NAVICULARTHRITIS.

WHILE other lamenesses of the foot were plainly traced to their seat and had their nature satisfactorily developed, there remained one, of which, from its seat lying out of the way of ordinary or superficial observation, the pathology continued wrapped in obscurity, or rather enshrouded in error, the supposition and generally received opinion being that it lay in a part with which, as has since been demonstrably proved, it had never any connexion. What we now recognise as *navicularthrititis* was acknowledged to be a *foot* lameness, and was imagined to be located in the coffin joint. Nor was this groundless supposition effaced from the minds of veterinarians until Mr. Turner produced irrefragable evidence, negative as well as positive, that the navicular *bursa* or joint, and that alone, was the seat of the obscure disease, and the sole and exclusive source of the lameness. "The coffin joint is *never* affected," says Mr. Turner: adding, "I have dissected all the groggy feet I have been able to procure, and have found the navicular joint diseased *in every instance*."

It is not difficult to find reasons why this discovery was not made prior to the institution of a veterinary college, though it is any thing but creditable to such an institution that it remained unmade after the anatomy and pathology of the horse was publicly professed to be taught. Deeply and cunningly buried as the navicular joint is within the hoof, surrounded on every side by bulwarks of the strongest description, we have no right to marvel

that the farriers of old did not discover the hidden retreat of lameness; but we have good reason to complain that *veterinary colleges* did not find out the seat of a lameness which was acknowledged by them as well as others to be in the foot. Had they cut into the navicular joint in any case where death happened to befall the lame horse, they could not have failed to have made the discovery; and the readiest way of laying open the joint for inspection is to make with a saw a vertical incision through the quarter of the hoof, on either side, carrying the incisions obliquely inward through the cartilages; then, with a scalpel detaching the perforans and perforatus tendons from their union with the contiguous parts, the former may be dissected down to its place of insertion, and turned back so as completely to expose the navicular (bursal) joint.

THE PARTS DISEASED, in cases of navicularthrititis or grogginess, are the under surface of the navicular bone and the upper one of the perforans tendon. It will be remembered that the inferior or posterior surface of the navicular bone is covered with cartilage for the purpose of articulating, i. e. forming a *bursa* or joint with the opposed tendon of the perforans muscle, which in the motions of the bone, upward and downward, plays over it something after the manner of a rope over a pulley: the surfaces of the bone and tendon being in more complete co-adaptation from the circumstance of the bone having a transverse eminence (or *crest*) across its middle, to which the tendon is fitted by a corresponding excavation in its substance, which hereabouts is rather of the nature of cartilage than tendon. And both these cartilaginous surfaces being lined by a delicate vascular (*synovial*) membrane, the same as other bursal cavities are, which continually exudes joint-oil, the play of one upon the other is at once rendered facile and frictionless.

Now, it is either the said crest across the navicular bone or the opposed concavity in the tendon, or both together, which shew the earliest signs of disease in cases of navicularthrititis: of the two, Turner seems to give the priority to the tendon; whereas Dr. Brauell informs us, his observations have proved to him that neither the navicular bone nor the bursa is the *invariable* nidus of incipient disease, "it being as likely to arise in one tissue as the other;" and adds, "that when the bone is primitively attacked, the disease develops itself tardily and insensibly; but that in the tendon the evolution of navicularthrititis is comparatively rapid and decided." Let which part will be first attacked, it is pretty evident that the opposed surface soon takes on the morbid action, either from direct contact, or, as Brauell says, from "sympathy:" the curious accompanying fact being—one that casts a strong light upon the etiology of navicularthrititis—that the upper or coffin-joint surface of the navicular bone, although covered with

articular cartilage the same as the lower, has not, on any occasion whatever, been found a participator in the disease. "I have frequently seen," says Mr. Turner, "in long-standing cases of navicular disease, not only all the cartilage of the inferior surface of the bone ulcerated, but also a material part of this small bone absorbed—almost annihilated—and yet found its upper surface sound, with the cartilage entire, and the synovial membrane quite perfect."

THE MORBID APPEARANCES presented by the navicular bursa of a horse who during life had been the subject of lameness from navicular disease, will vary according to the stage the disease happens to be in at the time of the horse's death, and will also be influenced by the treatment the animal may have undergone for it during his life. It is only by chance that, in the early stages of navicularthrititis, opportunities offer for *post-mortem* inspections; though in the latter or *groggy* stages opportunities abound: it being any thing but a rare circumstance for an unfortunate wight of a horse to be led to the slaughter-house on the very account of his grogginess.

That the disease at its outset, in its most active form, consists in inflammation, we have every evidence we can have to shew, considering the buried situation of the navicular bursa, and considering that the inflammation itself, at its highest, is no more than what we should, comparing it with other inflammations, denominate *sub-acute*. Exceptions, however, must be made of such cases as occur on a sudden—where the horse, perfectly sound the moment before, and never lame at any antecedent period, falls lame in a moment; for in such cases inflammation has had no time to set in to occasion the lameness; though it speedily supervenes in the injured tissues, and, subsequently, itself becomes, if not the sole, a highly aggravated cause of the lameness. The probability is—for we can only through some mere accidental occurrence put it to the proof—that lameness occurring thus suddenly proceeds from *lesion* or actual breach of the synovial membrane of the navicular bursa, and that either the crest upon the navicular bone, or the depression in the tendon opposite to it, is the seat of such lesion. At the same time it is to be presumed, that such injury—whatever it may be—is intense of its kind, from the fact of its producing *at once* a limping lameness.

A case related by the late Mr. Henderson, of Edinburgh, in the second volume of THE VETERINARIAN, will be found to furnish us with some light hereupon. The horse had been lame from ossific inflammation of the cartilage of his left fore foot; but had been restored to soundness, and continued sound for three years, when he fell lame again in the same foot. This time, however,

remedies which had before proved successful, failed; and Mr. H. had come to the conclusion that his case was *navicular*, and that, therefore, his condition was hopeless; on hearing which opinion the owner took him and drove him seventeen miles in a carriage, the consequence of which was an attack of acute founder (*laminitis*) of which, on the sixth day, he died. Upon the inferior surface of the navicular bone, in its centre, was discovered "a dark red spot," and "very small spiculæ of bone were beginning to shoot through the articulating cartilage." This shews the cartilage was in the *preparatory condition* for ulceration.

When, on the other hand, navicularthrititis steals on by degrees—as is the usual mode of its attack—we have evidence sufficient that inflammatory action has set in, and to this we are bound to ascribe most, if not all, of the anormal phenomena which follow. In this case, the probability is, that the injury giving rise to the inflammation amounts to no more than a contusion or bruise of the synovial membrane; and this is Mr. Turner's opinion:—"I am thoroughly convinced," says he, "that this complaint (navicularthrititis) at its commencement, is neither more nor less than a *bruise* of the synovial membrane lining the joint."

Brauell tells us that the commencement of the disease is usually marked by "either inflammation of the bursal membrane only, or of that and the navicular. The superior portion of the bursa which unites with the superior border of the navicular bone, and is contiguous to the tendon, presents upon its internal surface a blush of redness, accompanied at times with slight tumefaction. The portion which covers the trochlear cartilage, as well as the anterior surface of the tendon, has lost its pearly whiteness, and taken on a saffron hue. And the bursa itself is frequently thickened. The fluid contained within the bursa is of a reddish hue. The vessels passing underneath the navicular are often found injected; and the flexor tendon at its insertion often has the appearance of having been compressed at its sides: its anterior surface looking wrinkled."—"When the navicular bone is inflamed it is red and strongly injected. The vessels traversing it are dilated. But when macerated, it is found to have decreased in weight—its texture to have become more porous; occasionally the bone having a puffy appearance."

INFLAMMATION HAVING SET IN, WHAT FOLLOWS?—Remembering that the inflamed tissue is a secreting structure, and being acquainted by observation with what happens in like circumstances in other joints, we are prepared to meet with

DEFECTIVE SECRETION OF SYNOVIA. The late Professor Coleman had observed this change; and the fact has since received ample confirmation at the hands of Mr. Turner, whose words are—

“ In the earlier stages of the disease there is deficiency of synovia, but not a total absence of it; the secreting synovial membrane highly inflamed, &c.—In the advanced stage of the complaint there is a total destruction of the joint, which is so completely disorganized that it can no longer act as a joint. *There is not a drop of synovia to be found in it.*” This constitutes what is called the *dry* state of joint; and it seems like a remarkable occurrence in a bursal cavity—which the navicular joint in reality is; it being so well known that inflammatory action in *bursæ* is commonly productive of augmented secretion of synovia, as is instanced in the *capped hock*, the *windgall*, &c. For my own part, however, I do not regard this deficiency of synovia in the navicular joint as an anomaly to the general law of articular inflammation. I very much doubt that in the *earliest* stages of navicularthrititis the synovial secretion is diminished; I should rather feel inclined to think it was augmented, although it may be extremely difficult to produce demonstrative proof either of one state or the other in that *incipient* stage of the disease which alone could turn out satisfactory.

As, however, the disease in the joint advances, and ulceration comes to destroy, or interstitial deposition to change, the secretory structure of the synovial membrane, the secretion, of course, would become scanty, and even wanting altogether; and this I suspect to be the history of the dry navicular joint; and not, as I said before, anything different in the inflammatory action from what happens, under like circumstances, in other joints and bursal cavities.

ULCERATION OF THE CARTILAGE speedily follows, if it be not simultaneous in its appearance with, the inflammatory action. It must be remembered that the synovial membrane clothing the articular cartilages is of that tenuous character, that its existence upon such parts was for a long time disputed; and that no sooner is it attacked with inflammation, than from its low degree of vitality it, or rather the cartilage underneath it, falls into a state of ulceration; and it is the most prominent point of the cartilage, the part most remote from the source of circulation, which is the first to fall into this state; and the same may be said of the hollowed central point of the cartilaginous capsule of the tendon opposite. Once commenced, ulceration spreads down the sides of the navicular crest, giving the formerly smooth and shining surfaces of the bone the patchy eroded aspect which has been well characterized as looking like *worm-eaten*; at the same time that, owing to the ulceration, and to the attenuation as well, of other parts of the articular cartilage, discolouration is very visible: the surfaces having, in exchange for their humid and shining aspect, taken on them a dead and dingy brownish tinge.

Braucll, whose observations on this point are worth our recording, says,—“the consequences of inflammation of the navicular bone are, in all cases, *a diminution in its magnitude*; and *caries* is the primary cause of this. The caries is rather deep or superficial, and is found invading one or more points, particularly the crest (or transverse eminence) of the navicular bone and its lateral depressions. Prior to the development of the caries, little eminences about the size of millet seeds are discoverable upon the surface: after maceration they look like so many *exostoses*.”—“As the caries increases in depth and breadth, the holes in the bone enlarge, sometimes attaining a capacity to hold a hazel nut. In this porous condition the bone is exceeding liable to fracture, an accident the more likely to happen from the caries being accompanied by friability of the substance of the bone.”—“And, while the navicular bone is experiencing loss of substance on the one side, it is very seldom that any new-formed osseous matter is deposited upon the opposite (articular) surface. It is around the borders, posterior, superior, and inferior, where such deposits are generally found. And it is the union which takes place between such incrustations shooting out from the posterior and inferior borders of the navicular bone, and similar *spiculæ* issuing from the back part of the coffin-bone, that constitutes ankylosis between one and the other.”

ADHESION.—At this period of the disease, the synovial covering of the perforans tendon being likewise in a state of exulceration, adhesion is very likely to take place between it and the navicular bone; though in a case where ulceration of the cartilages prevails this is not so likely to happen as in one wherein the primary ulcerative action in the membrane is immediately succeeded by a granulative or adhesive process. And it is most usual for this adhesive action, which, be it noted, may ensue without any previous ulceration, to take place around the circumferent borders of the bursa rather than in the middle or articular parts.

An appearance I have observed adhesion to take on in cases of not very old date or chronic character, is, a membranous sort of morbid production spreading from the border of attachment of the tendon upon the circumferent surface of the bone: the new formation being of a pink colour, and apparently organised, looking like converted albuminous effusion. Mr. Mogford, of Guernsey, who happened to be with me while I was examining into a case of this description, informed me he had frequently observed a similar condition of the joint.

Braucll's observations hereupon are,—“the flexor tendon frequently contracts adhesions with the navicular bone, but not throughout its whole extent of contiguous surface, but only at those places bare of synovial membrane, and where separation and

rupture of its superficial fibres has happened. At first, these fibres exhibit no more than partial disconnection or roughening; gradually, the entire surface becomes covered with elevations and depressions, and thoroughly uneven. And now very frequently may be perceived upon it red *striæ*, looking like muscular fibres, and these appear to be the result of exudation. Sometimes, in places, greenish spots are perceptible. The destruction of the tendon proceeds with the continuance (and aggravation) of the disease; extending from before backward, in spots, until at length the substance of the tendon becomes so reduced that it is actually transparent: nothing of it, on occasions, remaining save slender softened bundles of fibres, separated from one another. The rupture of these is the natural consequence of the ulcerative action; though before that takes place, the tendon is found to have attached itself to a fresh place in the superior and posterior part of the navicular bone: the two parts being also united by a solid fibrous layer furnished by the right superior suspensory ligament, which is very much hypertrophied and thickened for the purpose."

THE TERMINATIONS OF NAVICULARTHRITIS, then, may be looked for as follow:—1. In *resolution*, or return of the navicular joint to its pristine condition—a termination, it is to be feared, not often to be looked for, even under favouring circumstances, and certainly never to be expected under opposite ones. 2. In *adhesion*, and this would appear to be the most common termination; and though not the most favourable, still so far from being the most unfavourable that the horse will, in the absence of ulceration in the joint, probably step sound with it, or sufficiently so to continue his ordinary work. 3. In *caries*, ulceration of the bone, and in time liability to, if not actual, fracture of it; with or without ulceration of the tendon as well, and in time liability to, if not actual rupture of it; in either of which disastrous issues of the case nothing remains but the bullet.

COLLATERAL DISEASE, no doubt, will on occasions arise out of navicularthrititis, though such is by no means so frequent as has been imagined: on the contrary, in the generality of cases, even for years will the disease confine itself to the navicular joint, and, as I said before, on occasions to the joint of *one* limb, the fellow fore-foot remaining unaffected. "With regard to ossification of the cartilages of the foot," says Mr. Turner, "and ossification of portions of the ligament of the navicular bone, and other bony excrescences within the foot, I have to remark, that, having dissected so many extreme cases of chronic foot lameness of many years' standing, in which I have found all the ravages of the disease *limited to a space within the foot not exceeding half-an-inch square*, and unaccompanied with the slightest disease of any other part of

the internal foot, I am induced to consider them (ossification of the cartilages and ligaments, &c.) as *mere effects* arising out of the navicular disease; and more particularly as there are more groggy feet *without* the slightest ossification of the ligaments of the navicular bone than with them."

THE CURE OF QUITTOR.

By EDWARD BROOKS, M.D. Boston, United States of America.

Mr. Editor,—THE disease which in France is known by the name of *javart cartilagineux*, or *encorné*, and which in England goes by that of Quittor, is so frequently met with in practice, and so rarely treated with complete success in either country, that I make no excuse for forwarding you the following sketch of the discovery of M. Mariage. Indeed, quite a revolution has been achieved by this gentleman in the Royal College of Alfort. The delicate operation for quittor, of which the French are so justly proud—M. Henri Bouley's pet proceeding, in the accomplishment of which he is so lavish of his great dexterity in all surgical proceedings, the magical operation of veterinary France in a scientific sense—is no more! Alas, for the skilful hand of many an ambitious surgeon! A well-known escharotic liquid, that of M. Villate, as published by him in 1829*, has supplanted, at last, the cutting instrument; and to M. Mariage, veterinarian at Bouchain, belongs the honour of having first proposed and perfected an application to the disease in question.

"The liqueur de Villate is to be injected into the fistulæ with a syringe.

"The injections should be given regularly every day, two or three times in succession, according to the number and depth of the fistulæ.

"If the fistulæ are numerous, the injection should be syringed into their various orifices.

"In the case of a multiplicity of fistulæ, it is necessary, in order to force the escharotic fluid to penetrate into the sinuses, to inject by one orifice, the others being closed, until the piston refuses to descend.

* "Sous acetate de Plomb liquide 128 grammes
 Sulfate de Zinc }
 Sulfate de Cuivre } *ã ã* 64 grammes
 Vinaigre blanc $\frac{1}{2}$ litre

"Dissolvez les sels dans le vinaigre ajoutez peu à peu le sous acetate de plomb, et agitez le mélange."—*Recueil de Med. Vét.*

"The number of the injections should vary with the number of the fistulæ, with their size and depth; but, as a general rule, they should be renewed every day, and in quantity sufficient to wash completely all the cavities by which the cartilage is traversed.

"The effect of the injections is during the first eight days to render the suppuration more abundant and whiter. The tumour simultaneously softens and contracts, and the lameness diminishes.

"The signs of cure are either a slight hemorrhage at the close of the escharotic injections, or a difficulty in pushing them into the fistulous orifices."

A large number of intractable cases have been radically cured here by this process in from fifteen to twenty days' time. As I have repeatedly witnessed the almost miraculous effect of the Liquor of Villate, I do not hesitate to send you this sheet, in the hope that similar experiments may prove equally successful in England. The "Recueil de Medicine Vétérinaire," for June 1847, just published, contains an elaborate article upon this matter, from the pen of M. Henri Bouley.

I have the honour to be, Sir,

Your obedient Servant.

Alfort, Aug. 19, 1847.

TWO IMPORTANT CASES.

Communicated by WILLIAM FIELD, Esq.

I.—LITHOTOMY IN A GELDING.

A GREY gelding, aged, the property of C. Smith, Esq. of Balham, Surrey, was sent into Mr. Field's hospital for horses on the 28th July last. The symptoms being unequivocally those of *stone in the bladder*, Mr. Field determined at once on the operation.

Accordingly, after some two or three days of preparation, the horse was cast and secured in the manner usual for lithotomy, and went through the operation without any thing extraordinary occurring: the casting and liberating and operation, altogether, not occupying more than twenty minutes.

This being the sixth case on which Mr. Field has operated, five out of which have proved successful, and his mode of operating being as simple as it is effectual and safe, it may be desirable here that we should briefly run through its details.

For the male subject he needs no more instruments than *staff*, *scalpel*, and *forceps*; for the female, forceps only: nor does the latter require to be cast for the operation; it being most conveni-

ently performable on her in the standing posture. The male subject being cast, and turned upon his back, with his hind legs drawn forward, the staff—which is a polished iron one, of unusually large size, with a curve at the end, having a groove along it—is passed through the penis along the urethra, and pushed on until it abuts against the symphysis pubis, or rather until its curved part has entered the curvature of the urethra, which it will readily be found to do. Thus introduced, the staff is to be committed to the operator's assistant, and by him held in the upright position, at the same time that its end is kept steadily maintained within the curvature of the urethra: this will enable the operator readily to make an incision with his scalpel through the perineum into the groove of the staff, of ample dimension to admit his forceps; which are now, after the finger has been introduced into the passage to make every thing clear, to be insinuated, and with moderate but sufficient force to be pushed onward into the bladder. No gorget or bistoury is used to dilate or to incise the urethra; but a pair of straight forceps, having narrow spoon-shaped blades, are at once cautiously introduced, the urethra, through its extreme elasticity or dilatability, giving way to them. The stone extracted in the present case was of the mulberry description, of a round oblong shape, and weighed four ounces and a half. It was dark coloured, and possessed a strong urinous odour. The extraction of the stone was followed up by injections of tepid water into the bladder.

Immediately after the operation the animal staled freely, his urine passing through the wound, which had been brought together by sutures, as well as through the penis; and for the three subsequent days urine still issued, in part, through the wound. On the fifth day, however, it came altogether by the natural passage. The horse did not experience a single untoward symptom; neither did he, after the operation was ended, seem to labour under any pain; for he ate and drank well the whole of the time. He left Mr. Field's yard on the 4th September, and is now at work, quite recovered.

II.—SCIRRHOUS ENLARGEMENT OF ONE OVARY, ACCOMPANIED BY ASCITES.

A bay mare, the property of the Hon. Jas. Norton, was sent to Mr. Field's hospital for horses on the 1st June last. She was, from the circumstance of her belly having undergone of late visible enlargement, suspected to be with foal; though from her present owner having not long ago purchased her, there were no very ready means of ascertaining whether she had been to any horse. The mare exhibited no pain nor ill health, save that she was losing

flesh; and on that account something needs be done to afford her relief.

The enlarged abdomen was the only *visible* symptom Mr. Field had for his guidance; and, although this was unaccompanied by any œdema of the belly, breast, or legs, yet did careful examination of it convince Mr. Field that it was neither more nor less than ascites; at the same time that it led to the discovery of a tumour in the interval between the ileum, transverse lumbar processes, and ribs, which, from its situation, he took it to be an enlarged ovary: and such it turned out. Acting on this firm belief, he tapped the mare, and drew off four gallons of fluid. This had but little if any effect upon her, either for good or ill. She had all along breathed tranquilly, and had an undisturbed pulse: still, she continued to lose flesh, and was evidently, altogether, in a hopeless condition. Mr. Field sent her away to his farm, willing to give her every chance, where she remained six weeks. Her belly during this time growing large again, she was tapped a second time, and had, as before, four gallons of fluid withdrawn. After this she was put to death. In addition to what had been drawn off, thirty-two gallons of fluid were found within the peritoneal cavity: there was discovered, on the near side, a scirrhus ovary, of the magnitude of a man's head, of a globular form, weighing twenty-two pounds. Contrasted with its fellow ovary, which, perhaps, was somewhat smaller than usual, it looked in point of size like a pumpkin by the side of a walnut.

The tumour cut in half presented surfaces of a marbled aspect: an appearance produced by an ash-coloured substance, of which it was almost entirely composed, being crossed and intersected in every direction by white fibrous bands, issuing at short intervals one from another, from the inner surface of the proper tunic of the ovary, by which its component substance was irregularly partitioned into numberless compartments of all shapes and sizes: the ash-coloured substance itself exhibiting more toughness than firmness, and looking like organized and converted albuminous deposit. In the centre the tumour had undergone the ulcerous degeneration. There was an irregular cavity, presenting the appearance of having had its origin in two or more abscesses ulcerating into one, which altogether contained about a tea-cup-full of purulent matter, looking like good laudable fluid pus, without any grumous or caseous admixture. The tunic of the ovary had grown with the tumour, and acquired thickness and strength with its increased growth, and presented a fibrous character. The blood-vessels had likewise undergone proportionate augmentation. Altogether, the case turned out an exceedingly interesting one.

WHAT DOES "VETERINARIUS" MEAN BY "INSTINCT?"

Sir,—IN THE VETERINARIAN for August I find a short extract from Archbishop Whately's excellent thoughts on Instinct, which extract has brought forth certain strictures upon it from a writer who signs himself "Veterinarius." These strictures appear in THE VETERINARIAN of the present month (September). Now, as the question of instinct is one, to my mind, of peculiar interest, I should like to make a few observations upon what "Veterinarius," has said; but, previous to doing so, I should prefer something from him upon the question of a more *precise and definite character*. Will "Veterinarius," then, be so kind as to define what it is that HE means by the term *instinct*? By doing so I shall feel obliged.

Your's truly,
LOGOS.

September 16th, 1840.

Extracts from Foreign Journals.

COMPTE-RENDU OF THE TRANSACTIONS AT THE ROYAL VETERINARY SCHOOL OF ALFORT, DURING THE SCHOLASTIC YEAR 1845-46.

Clinical Chair.

Professor M. H. Boulet.

Chef de Service, M. Prudhomme.

THE study of domestic animal medicine acquires an importance better appreciated every day in an age like ours, when the attention of all the *esprits* in France, attracted by agriculture, is actively busied about every thing comprehended within its vast domain.

The world, in days gone by, strangers to affairs of a veterinary nature, or little heedful of them, has come at last to take an interest in them; and, seeing the amount of wealth represented by our animals, begins likewise to take an interest in the maladies under which they labour, and which, by propagation, inflict such heavy strokes on the public weal, at the same time that the health of man himself is liable to become compromised.

Such, in point of fact, is the position occupied by our animals in agricultural and industrial affairs, that maladies which decimate them affect the sources of public revenue; in like manner as is their amelioration, their perfectionment, and their well-being a source of general prosperity.

And such, indeed, is the fellowship established in habitation between man and the beast submitted to his empire, that many maladies are common to both; and through some mysterious connection become readily transmitted from one to the other.

In this two-fold point of view, the *compte-rendu* of the clinical chair possesses a general interest, and this consideration of its utility will, doubtless, excuse the mention of some disclosures we are about to make.

Of all the constitutional disorders to which monodactyles are subject, that which has for some years demanded the foremost attention of the public is *glanders*; and it has acquired this legitimate priority as well from its effects, and the ravages it daily commits among the equine race, as from the property it possesses of being capable of transmission to man: fatal property! too manifest at our day to admit of denial.

What is the nature of this terrible disease?—What are its causes?—In what manner is it communicated?—What form does it assume?—How is it to be cured?—How prevented?

Such are the complex problems incessantly presented to the minds of those engaged in making observations on the disease for a period of three thousand years, towards the solution of which each day brings with it its tardy contingency of enlightenment.

The year but just passed, unfortunately yet more fruitful, as it would seem, than its predecessors in furnishing subjects for observation, has added but little to the truths already in store on the history of glanders; but it has served to confirm them, to prop them with fresh observations, and such important matters will perhaps bear repetition in such general form as is ordinarily assumed.

Like signals at sea, which by their uniformity of colour are so significantly known to the mariner, such phenomena cannot too often be brought before us.

I. Glanders, originally confined to monodactyles, is a disease in the acute form evidently and demonstrably contagious, from a virus fixed, and volatile too perhaps; but in the chronic form, doubtfully, disputedly, and very disputably so.

II. Its transmission in the acute form offers every facility from the horse to animals of the same species, by direct contact, and perhaps simply by co-habitation as well, without contact.

This last mode has not hitherto received confirmation by experimentation.

III. Transmission to man is possible in the same ways, by contact, and also, as it is said, by cohabitation.

IV. The most certain mode of communicating glanders is by inoculation under the epidermis.

V. It is likewise with certainty communicable from the horse to other solipedes. It is in this way that man commonly contracts the disease; and if it be communicable to the sheep and dog, as some rare experience would lead us to imagine, it is by this mode only that such transmission is practicable.

VI. Its seat is throughout the orgasm infected by the virus; and all tissues the products of it, impregnated with blood, possess—it is true, in different degrees—the property of transmitting the disease.

VII. Nevertheless, there are situations in the body where the infection of glanders becomes developed and communicable more apparently than in other parts: the respiratory apparatus, and especially the nasal cavities, and the whole of the external tegumentary system, with the cellular tissue, and the superficial lymphatic system.

VIII. The frequency of the appearance of symptoms denotive of the glanderous infection in these places of predilection, has long caused glanders to be considered as a disease of the lymphatics, of the nose, the skin, and subcutaneous cellular membrane: an error which observation has corrected.

IX. Glanders is a disease of the system at large, exhibiting an especial predilection for certain organs, a character common to it and all virulent diseases, be what will their nature.

X. Among the numerous causes to which the origin of glanders is traced, the most certain, in our opinion the most infallible in its results, is work, over-work, the limitless unmeasured work to which are condemned those unfortunate horses which are used in carrying on industrial labours either on a large or a small scale.

Some modern chemists have given it as their opinion that animals, man included, were nothing, in a scientific point of view, more than sorts of furnaces or machines for carrying on combustion. This ingenious supposition is realised to the letter by those who, for the most part, use the horse in their employ. In their hands the animal is no more than a machine, from which they expect an incessant movement in direct and absolute ratio to the quantity of aliment furnished for its consumption. Nutriment and labour constitute for them the simple calculation of usefulness of the animated moving power.

But such a calculation in its application leads to the saddest results. Disregarding any feeling brutes possess, as well as every faculty of conservation, and looking upon them as mere machines, all organic movement is perverted, and living parts, so prompt to accommodate themselves by virtue of their complex structure, frequently acquire properties most adverse to organization.

The wheels of a living machine, indeed, do not wear after the manner of those of one without life, by simple external friction, changing the shape and superficies of parts without affecting even their structure. But with the organic body it is inwardly, within its profoundest depths, at the points of contact between its constituent molecules, within that mysterious inclosure wherein the nutrition which supports the wear and tear is in operation, or rather that unseen and incomprehensible alteration of living matter which deprives it of its affinities and normal aptitudes to communicate fresh properties to it, often contrary to the very principles even of life.

In this manner are engendered, at the very founts even of nutrition, the germs of contagious diseases.

If now we dismiss theory to consider matters in their practical bearing, we perceive at every point confirmation of the general assertion we made at setting out, viz. that glanders is a necessary and fatal consequence of excess of work, carried to an extremity, to which the horse is subject in most industrial employments. Almost all at the present day have experienced strokes from this flail. Glanders succeeds as surely as the shadow follows the substance, and such are found to be its ravages, that frequently in a few years the same stable becomes the dwelling of many fresh inhabitants.

Such a malady as this is not only harmful to social weal, it threatens the public health. It may, in fact, be said that in spreading from time to time over a greater number of heads, and incessantly undergoing revival at its proper source, the glanderous virus has become, as it were, concentrated, and in our days has acquired renewed activity. And, indeed, notwithstanding acute glanders has been known from the earliest antiquity, seeing that Absyrtus has given a complete description of it, yet open the works of authors of no older date than a quarter of a century, and you will hardly find mention made of its acute form: if they do mention it, it appears as a rare occurrence, an exception, a complication of chronic glanders, the only form which, from its frequency, seems worth giving their attention to.

While at the present day, the acute form of the disease, i. e. the contagious form, is perhaps more common than the chronic disease, and for certain is so frequently complicated with this last

that the distinction between the two is by no means at all times evident.

And, doubtless, it is in this increased and novel acuteness of the disease that we must seek for and shall find the reason of the contagion lighting upon human kind, who thus in our day, but too improvident, has received as our portion a disease more terrific than those by which our race was infested in ancient times, and from which the progress of public hygiene had freed it.

In all ages glanders has been considered as incurable, nor will it be conceded to ours, no more, doubtless, than to those to follow, to write in opposition to this melancholy truth.

A disease complicated with deep-seated transformation, and of alteration often most extensive in the structure of organs of the utmost importance to life, cannot admit of cure. The plastic force inherent in the tissues of the vital economy has limits which cannot be surpassed. Like the spider, active in repairing any solutions of continuity in its web, it becomes powerless in restoring to their normal type degenerate and transformed tissues. To spend time in the research of this philosopher's stone is to waste to no purpose one's energy, to recommence, in fact, the impossible labour of Tantalus. Whatever we may essay, it is too much to be feared that we shall never reach the branch bearing the so-much-desired fruit.

But, on the other hand, if it be unavailing ever to attempt a cure, there exist effectual means of prevention; if not to banish the pest altogether, at least to restrict its ravages, to which it is impossible public attention can be too often called.

Doubtless, with the laws in France regulating property, and with the necessities imposed by general consent, it is impossible to obtain from proprietors of horses what one exacts from slave-owners—a maximum of labour for the beings in their employ; but there are in existence laws and regulations of the *police sanitaire*, at the present day fallen into disuse on account of their excessive rigour, to the observance of which it will be needful to have recall until such time as legislation on this head undergoes some modification.

Here is a subject, indeed, worthy of all the attention of the legislature. For very certain it is, that if the augmented power glanders has acquired within these few years be attributable to the unavoidable excess of work; so, on the other hand, is its propagation among so many subjects, and especially its transmission on human kind, fairly ascribable to the all but total lack of *surveillance* over establishments where the horse is used on a large scale.

At Paris, for example, where, according to a curious statistic recently published, there are horses sufficient for carriages for the

conveyance throughout the year of upwards of seventy-three millions of persons, and a corresponding quantity of merchandize, the daily *surveillance* of the streets, markets, public places, and all the horse establishments of the town, is committed to—would any one believe it?—a single individual, ill paid, and a complete stranger to veterinary affairs, which, in point of fact, is equivalent to saying that in Paris there is no such thing as horse supervision.

Well, such a state of things must be altered; we must have real and rigorous and constant inspections of establishments where great numbers of horses are employed; and every person possessing a glandered horse must be obliged, under the declaration of penalties fixed by the laws in force, to pay immediate attention to enactments so desirable, in order that, in whatever situation it may be, and under any pretext, the use of the glandered horse may be given up; and that his slaughter be rendered peremptory, seeing that competent judges has pronounced his case incurable. And, lastly, that no communication be permitted on the part of man with the suspected animal further than is absolutely necessary to give it food and water, and the requisite cleaning; so that hopes might, at least, be cherished of putting human creatures out of the reach of the stroke of so dreaded a malady.

By the side of this scourge of the equine race comes as an equivalent, reckoning the disasters it is the cause of, a disease to which oxen are subject, the consequence, like the former, of want of knowledge of their hygiene and of the abuses of them. We are going to speak of the peripneumony (*pleuro-pneumonia*) of oxen, which in our days has spread so widely, seeing there is hardly any country in Europe which has not felt its ravages.

Confined at one time, according to some authors, to mountainous countries, where it must, say they, have been engendered in the narrow low sheds in which they herd the flocks for the winter, peripneumony has spread from this primitive *fomes* in every direction, so that at the present day it is common to the mountain and the plain.

The first causes of this novel destroyer to our agriculture are as yet obscure, equally so with all those of general epizootic diseases.

In the artificial state in which we compel our animals to live amidst so many influences hostile to their nature and their organization, the development of disease is a complex result, and the mind becomes lost in search after the special causes which have co-operated in their production.

The air, by its sudden variations of temperature, water by its coldness and impurity, stables and cowhouses by their lack of air

and space, food by its divers qualities, usage by the abuses inseparable from it, all, no doubt, contribute to the development of the peripneumony of oxen; but through what mysterious combination do such causes, common to so many other diseases, give to this one the contagious character? Of this we are as yet in ignorance, and, probably, this is one of those secrets which it is not intended man should ever unsolve.

Nevertheless, it is no small matter to have discovered the contagious character of an affection so rapid in its spread within a few years; and since, in a case such as this, in order that we may have the conviction of the whole world with us it is impossible to overfurnish proofs, it is our intention to give some in detail in the course of our special *compte-rendu*. We shall shew peripneumony originating in one spot, spreading, by means of a thread, certain and ready of transmission, to other spots in the neighbourhood, and ravaging cattle-sheds which, up to that hour, had remained free from every taint of such disorder.

It becomes our duty, then, to proclaim with a loud voice, that THE PERIPNEUMONY (the *pleuro-pneumonia*) OF OXEN IS CONTAGIOUS; contagious through the expired air, through the nasal mucus, through the salivary discharges through, perhaps, the putridities of the dead carcass; and it is principally through contagion that the disease has for some years been spreading into so many countries.

Incurable, or almost so, in all its stages, it is not by medicine that we are to expect to stop its ravages. Hygiène alone, well understood and put into practice, can forestall its production, and measures taken by the *police sanitaire* set limits to its progress.

Doubtless, to repeat what we have said just now, our hands hold not the thread which can conduct us from the disease itself to the source whence it has taken its rise; nevertheless it is presumable, that, when we shall have elevated, enlarged, ventilated, in a word *hygienised* the filthy cow-houses in which, everywhere in France, oxen are lodged, *sans* air and *sans* light, surrounded by a heated atmosphere, loaded with the mingled impurities of miasmatic emanations from their bodies, we shall no longer believe living matter, so ready to change and so dangerous often in changing, to be the source of those germs which render it capable of transmitting to other organisms such deadly transformations.

Similar results, no doubt, would be obtained from a better selection and more regular dispensation of aliment and drink, as also from a less demand on the services required of animals; services which, whatever be their nature, are of an exhausting character, and which, by excess, profoundly alter organic structure.

Forgetfulness of those laws of *hygiène* which direct the art of managing and working animals will, when sifted to the bottom, be found the primitive source whence issues that peripneumony which, in our day contagious, generates itself, and destroys a great proportion of the cattle of France.

Now, should you search into the history of epizootics, you meet with this universal cause, everywhere and at all times preponderating.

Typhus, for example, the other disease of cattle, less frequent in our day than pneumonia, and less fruitful, happily, in disaster—what is the cause of it? Invariably, want of intelligence, often, indeed, ignorance of the most barbarous kind, in the kind of attention they demand.

The history of the typhoid epizootic which, for these months past, has been ravaging Nièvre and Allier, furnishes quite a novel demonstration of this sad truth. Spread open the report which M. the director of the Alfort school addressed through the minister of those departments to M. the prefect of Nièvre, and you will see, in the chapter on the causes of the epizootic, by the side of the climacteric influences, probable consequences of man's want of foresight, the all-powerful influence of his heedlessness and ignorance.

* * * * *

There are many parts of France, in which, the same causes operating, we witness the same evil results; indeed, without going any further, we have only to look at what is the condition of the stables in which are lodged, in Paris, the cows who furnish the milk for the greater part of the town, and as you leave these stews you will ask yourself the question, how it is possible, not the health, but the life of an organic being can be supported in such a situation.

But these laws of *hygiène*, whose violation occasions so many evils, do they require but to be known to be put immediately into execution? Doubtless, no! It is by an amelioration of the social condition and the progress of public reason alone, the necessary consequences of such laws, that so wretched a state of things can undergo reform.

When agriculture shall be improved to such a degree as to afford comparative ease to those who till the soil; when, instead of living in a wretched state of insulation, they shall unite their efforts for their reciprocal benefit; then will their enlightened understanding teach them to seek improvements which, at the present day, they scout for want of intelligence to comprehend them and means to apply them.

What remains must be done by the government. The law for

irrigations, passed last session, will become a powerful means of improving agriculture and ameliorating our domestic breeds.

But there is another law which, although a less important one, will, without doubt, not fail to operate most favourably towards the conservation and improvement of the very considerable part of the public property which is represented by the mass of animals covering our soil: we allude to the law intended to regulate in France the practice of the veterinary profession.

And, indeed, among the pests which desolate our country, empiricism is not the one which occasions farmers the slightest loss. Diligent propagators of the most absurd prejudices, obstinate followers of the most routine and dangerous practices, cow-leeches, abound in every part of our country, opposing to every idea of improvement and onward progress the most insurmountable barriers.

Notwithstanding they are by Nature endowed with so little intelligence, all their art is employed in deceiving others; and, being in their turn duped themselves whenever they really mean well, their game consists in causing their clients to participate in their ignorance.

Would any person credit it?—In many parts of France, at the very barrier even of Paris, any contagion which a disease may exhibit is reckoned a fatality falling on the stable, and that the evil spirit must be exorcised, the ceremony for such purpose consisting in tracing some crosses upon the wall, and in some magic words, void of sense and reason, pronounced by the sanative sorcerer with a low voice in the infected stable.

As for any measures of precaution, simple and natural as they may appear, which would have the effect of circumscribing the evil within its primitive *fomes*, nobody ever dreams of such a thing; and so the contagious animals, free to go anywhere, carry with them the germ of the disorder they have concealed about them, and disseminate it in all quarters.

This, in a few words, comprises the history of the rise of most of our contagious epidemics. Once declared, the empiric becomes the active propagator of the disease. Heedless of measures of prevention which he does not understand, he goes about from the infected to the healthy stable (or cow-house), that he may give the last the benefit of his sorceries, and thus transmits, through his clothes infected with the virus, the germ of the evil he affects by his magic to destroy.

Neither is it only through the active part which he takes to “cure” the animals that this pretender renders himself obnoxious. The discredit he throws on our profession, the discouragement he

sows in the ranks of our brethren by a concurrence which they cannot, dare not, sustain with the means at the empiric's disposal; the disgust, in fact, experienced by the man conscious of his own art from the similarity which opinion, in a certain direction, has established between him and his fortunate rival; all these are causes which neutralize, annihilate even, the benefit derivable from the veterinary profession supposing they had the management of the *hygiène*, of the conservation and treatment of cattle.

A law guaranteeing to him these functions would at once be a *moral* one, seeing that it would protect the farmer against the practices, for the most part fraudulent, of the pretender in whom he is in the habit of placing confidence;—would prove of sterling utility to him, since it would confer that safeguard on his property which it so much needs; at the same time be in harmony with the *esprit* of our institutions, as well as in accordance with the general tendencies of our age of improvement.

Our Government are well persuaded of all this; let us hope that they will impress the legislative chambers with their sentiments; so that our profession may be enabled, unshackled, under the protection of the law, to fulfil their modest and useful mission.

Extracts from Domestic Journals.

THE NATURAL HISTORY AND ORIGIN OF DOGS.

CONTINUED FROM p. 515.

[From the North British Review, No xiii.]

OF the eastern or southern dogs of the Old World, several varieties are assuredly derived from jackals, or from certain animals commonly classed with these, such as the Thoan group, which includes the *Deeb*, or wild dog of Egypt (*Canis Anthus*), the *Thous* of Nubia, the *Zenlee* of the Hottentots, the *Tulki* of the Persians, and the great jackal, or wild dog of Natolia—*Thous acmon*. All these more or less resemble wolves on a small scale, being intermediate in size between them and the true jackals. They do not burrow like the latter, are not gregarious, consequently do not howl in concert as the jackals do, and have little or no offensive odour. Many eastern domesticated dogs bear a close resemblance to one or other of these species. Professor Kretschmer is of opinion that the Egyptians obtained their domestic breed from the

Deeb; and Colonel Hamilton Smith suspects that the greyhound of the desert was originally derived from a species very nearly allied, if not actually belonging, to the same section.

"If," says the last named author, "domestic dogs were merely wolves modified by the influence of man's wants, surely the curs of Mohammedan states, refused domestic care, left to roam after their own free will, and only tolerated in Asiatic cities in the capacity of scavengers, would long since have resumed some of the characters of the wolf; there has unquestionably been sufficient time for that purpose, since we find allusion made to these animals in the laws of Moses; they were then already considered unclean, for all cattle worried, injured, or not killed as the law prescribed, were ordered to be flung to them*."

It is well known that the streets and suburbs of eastern towns are still greatly infested by these animals, to which reference was no doubt made by King David, when he prays to be delivered from his enemies, "They return at evening; they make a noise like a dog, and go round about the city." Ps. liv, 6. Their savage nature is further illustrated by the fate of Jezebel; and a race of wild dogs is reported to have particularly infested the banks of the Kishon, and the district of Jezreel†.

Even in recent times, a very dangerous canine animal is said to follow the caravans from Bassora to Aleppo. It is called *Sheeb* by the Arabs, and all who are bitten by it are believed to die of the wound. Dr. Russell endeavours to explain this fatal result by supposing the creature to be in a state of madness, that is, labouring under hydrophobia; but he forgets that these wild animals are gregarious, several travelling together, which mad dogs never do. It has, indeed, been questioned whether hydrophobia exists at all in Western Asia. Colonel Hamilton Smith states it to be unknown there among the cur dogs of the cities‡.

It is, however, by no means unlikely that the larger, fiercer, and more powerful dogs of the East may have had some cross of the true wolf, because, although the latter animal is not now found in Judea, it is well known in Asia Minor, and the gorges of Cilicia.

* Naturalist's Library, Mammalia, vol. ix, p. 97.

† Encyc. of Biblical Literature, I, 570.

‡ Naturalist's Library, Mammalia, vol. ix, p. 175. Although other species, when bitten, may be infected by this rabies, it seems to originate solely in animals of the dog kind, or those nearly allied. In India, hyænas, wolves, jackals, and foxes are subject to it, as well as domesticated dogs. When it attacks wild animals, it seems to deprive them of all fear of man. The European wolf, in a state of madness, instead of avoiding rather seeks out the human race as his victims; and in France even foxes, under that strange and mysterious influence, have run into and been killed in the midst of crowds assembled in a market-place.

The Syrian wolf, at least of modern times, is a jackal. The geographical distribution of animals, we need scarcely here notice, has been greatly changed in consequence of the alterations on the condition of the earth's surface, produced by man himself. Hence, not only the wolf, but the beaver and the bear have ceased to be numbered among the inhabitants of Britain, and the *zeeb* of Hebrew and Arabian writers, the ravening wolf of our translations of the Sacred Scriptures, does not now occur in the countries of Palestine.

The genuine jackals are somewhat less in size than those above referred to, and differ likewise in their distribution, being not only found, like the others, in Africa and Western Asia, but also in the east of Europe and Southern India. They form burrows in the earth, assemble together in numerous troops, and have an offensive odour. They howl almost incessantly, and their melancholy cry, which commences at sunset and seldom ceases till the morning, is a well-known nuisance in eastern lands. They follow the footsteps of the greater feline animals, such as the lion and tiger, for the sake, as some suppose, of securing the remnants of their prey; but assuredly, so far from providing for the king of beasts, it is believed that they often do all in their power to circumvent and disappoint him. In regard at least to the tiger, it is well known in India, that while on ordinary occasions the nocturnal cry of a jackal is responded to by all his companions around, till the leafy woods become as the howling wilderness, there is a peculiar note of warning uttered by one of these creatures on the approach of the feline monster, which sinks the voices of all the others into the profoundest silence.

These lesser jackals (there are several species) also enter into cities after dark for the purpose of preying upon offal, or whatever else they can obtain. They devour carrion whether exposed or subterranean, that is to say, they will exercise their activity in digging into sepulchres, if these have not been properly protected. But during the fruit season they skulk about the vineyards, and grow fat on grapes. Although the offensive smell of the genuine jackals renders them unpleasant inmates in a family, they are by no means difficult to tame. We knew one which went about the house like a lank long-legged terrier, and shewed his difference of disposition chiefly in an incurable habit of gnawing the legs and arms of handsome mahogany chairs, to the great destruction of French varnish, and every other kind of polish. There is no doubt that these animals are also entitled to an important place in the genealogical tree of our domestic dogs.

"They associate readily with dogs, and hybrid offspring is not uncommon; nor is there a doubt that these mules are again prolific. The domestic cur-dogs of all the nations where the jackal is found

bear evidence of at least a great intermixture of their blood in the native races. The fact is strikingly exemplified in the greater number of the cur pariahs of India, and the home breeds of Turkish Asia, as well as of the negroes and the inhabitants of the great islands of the Indian Seas. M. Jeannon Naviez, mayor of Coire, is or was lately in possession of a hybrid dog, produced by a cross of the smaller wolf dog (Pomeranian) and jackal. It was of small size, but so quarrelsome and fierce that all other dogs were afraid to associate with it. Voracious in the extreme,—ducklings, chickens, all that came within reach, it devoured; and of such activity, that it sprung upon walls, and bounded along them with the security of a cat. It was very affectionate to the owner; but not a good watcher,—seldom barking, and very fond of digging in the ground*.

But besides the jackals, there is another important group of wild canine animals, known by the general name of "Red Dogs," which are extensively spread over many regions of the Old World, and are represented in the New by the Aguara Wolf already mentioned, and in Australia by the Dingho of New South Wales. In Asia they may be traced from the southern slopes of the Himalaya mountains as far south as Ceylon, and from the shores of the Mediterranean eastwards into the Chinese dominions. They usually want the second tubercular tooth of the lower jaw,—are rather long-bodied, with the eyes somewhat oblique, and the soles of the feet hairy. They are believed not to burrow, and lead a retired life in the jungles. Their natural cry resembles a kind of barking; and they hunt both by night and day in small packs. Although fearful of the human race, they attack all other creatures courageously, even the savage and more powerful kinds, such as the wild boar and the buffalo, and are said, by acting in co-operation, to brave the strength and ferocity of the tiger. They seem, indeed, to bear as inherent a hatred towards all the larger feline animals as so many of the dogs of Europe do to our domesticated cats; and they are described as being incessantly on the watch to destroy their cubs. The union of concert and courage which they display in their encounters with the adults is assigned by Indian sportsmen as the chief cause of the alarm which a tiger exhibits at the sight of a dog, even of a domestic spaniel.

To the group of red dogs belongs that peculiar and highly interesting species discovered in the Nepaul country, by Mr. Hodgson, and described by him under the title of *Canis primævus*. Its native name is *buansa*. This kind hunts both by day and night, assembled in small packs of from six to ten individuals, and follows

* Naturalist's Library, Mammalia, vol. ix, p. 212.

its game more by scent than sight, as may be inferred from the nature of the localities which it inhabits, and wears it out by continuous perseverance. Although irreclaimable in the adult state, its puppies, when captured early, and shewn a good example by being reared along with our domesticated kinds, are both gentle and sagacious. The species inhabits wooded and rocky mountain ranges between the Sutledj and Brahmapootra, and, under certain modifications, seems to extend far southwards to the Ghauts, the Nielgherries, and the coast of Coromandel. Mr. Hodgson was long resident in Nepaul, and was, we believe, the first to give us a distinct account of the buansa. He maintains it to be the original source of all domesticated dogs throughout the world, and hence his Adamic-looking designation of *canis primævus*. Having all the habits of the hound, it may naturally be presumed, amongst hunting nations, to have been early reclaimed, and easily educated for the chase—a pleasant pastime, and may, no doubt, in this way have originated the hunting races of different and very distant tribes. But, as Mr. Low has observed, “there is nothing in the characters of this, more than in those of any other given species, that can enable us to conclude that it can have produced all the dogs of the world. There is no more resemblance between this mountain hound of Nepaul and the sledge-dog of Greenland than between the greyhound of Persia and the terrier of England*.” We may here briefly mention, that the wild dog called *Kolsun*, described by Col. Sykes, the *Dhole* (so called), discovered by Mr. Wooller among the Mahabliishwar hills, and the *Quihee*, as identified by Dr. Spry, are all referrible to the Buansa race.

The wild dog of Beloochistân is both shy and ferocious, and keeps aloof from all human habitations. It is referred to by Colonel Hamilton Smith, as being one of two species of wild canines which occur in the woody mountains of south-eastern Persia, and probably extend along the lofty lands west of the Indus into Cabul. It hunts in packs of twenty or thirty, and when thus congregated will attack a bullock or a buffalo, and tear it in pieces in a few moments.

Allied to these are the dogs called *Dholes* in India, so named from an ancient Asiatic root signifying recklessness. The true Dhole (*Chryseus scylax* of Hamilton Smith) is described as intermediate in size between the wolf and the jackal, slightly made, of a light bay colour, with a sharp face, and fierce keen eyes. In form it approaches the greyhound: the tail is straight, not bushy; the ears wide, pointed, open, and triangular; the skin is dark, with the nose, muzzle, back of the ears, and feet, of a sooty hue. It is reported to hunt in large packs, and to utter a cry, while on the

* *Domesticated Animals*, p. 649.

scent, resembling that of a fox-hound, intermingled with snarling yelps. Dr. Daniel Johnston saw a pack attack a wild boar. The Dholes have been sometimes domesticated, and employed in the chase. Captain Williamson admits their fleetness, but says they are not to be depended upon for coursing, being apt to give up during a severe run, and turn aside to goats or sheep. They are, however, valuable in hog hunting. The true Dhole, we understand, is a rare species, and seems to occur chiefly in the Rhamghany hills, and sometimes in the Western Ghauts. The wild dog of Ceylon (*Canis Ceylonicus* of Shaw) is likewise a Dhole.

The *Pariah dogs* of India now demand a brief notice. It has been long a vexed question whether these Pariah races were a mongrel breed, descended from domesticated species of a higher class, or the offspring of indigenous wild animals, themselves native to the jungles. Naturalists (misled, it may be, in this, as in other instances, by the brilliant, though not seldom foundationless, discourses of Buffon) have generally inferred as a fact, that where wild and domesticated races, nearly allied, were found to occur in the same country, the former were only the emancipated or *be-wildered* descendants of the latter.

"In the present case, however, the wild Pariah is found in numerous packs, not only in the jungles of India proper, but also in the lower ranges of the Himalaya mountains; and is possessed of all the characteristics of primeval independence, without having assumed the similitude of wolves or jackals, which systematists seem to think must be the result of returning from slavery to freedom. There is nowhere any notice taken that they burrow, apparently resembling in this respect the rest of the present group: they associate in large numbers, and thereby approximate jackals; but their voice is totally different. In form, the wild Pariah is more bulky than the last mentioned species, but low in the legs, and assuming the figure of a turnspit; and the tail of a middling length, without much flexibility, is more bushy at the end than at the base. The ears are erect, pointed, and turned forward; the eyes hazel; the density of fur varies according to latitude, and the rufous colour of the whole body is darker in the north than in the south, where there is a silvery tinge, instead of one of black, upon the upper parts. They are said to have five claws upon all the feet, but whether there be a molar less in the lower jaw is not known. This species is in general so similar to the domestic, that if it were not ascertained that they existed in great numbers in the wildest forests at the base of the Himalayas, all possessing uniform colours, they would be considered, in the lower provinces, as of the domestic breed, and are often mistaken for them when they follow armies. The domestic Pariahs, however, are less timid,

generally more mixed with other races of dogs, more mangy about the skin, and variously coloured in the fur*."

The *domesticated* Pariahs of India are, indeed, a very mingled race, sometimes only half reclaimed, and frequently exhibit in their outer aspect the most unequivocal signs of degradation. Though noisy and cowardly, they are not without a certain degree of sagacity, and are consequently trained by the Sheckarees to their own mode of sporting, and are sometimes employed by the villagers in their hunts. Bishop Heber was forcibly struck by finding "the same dog-like and amiable qualities in these neglected animals as in their more fortunate brethren in Europe." They are frequently in a condition of even greater neglect and wretchedness than those of the Levant; and Captain Williamson informs us that alligators are kept in the ditches of some of the Carnatic forts, and that all the Pariah dogs found within the walls are thrown over as provision for those many-toothed monsters.

The Pariahs, that is street dogs, of Egypt, though also greatly degenerated by an uncertain sustenance, and frequent intermixture with curs of low degree, still retain marks of pure and ancient blood, referrible to the Akaba greyhound of the deserts, a large and savage race, much prized by the wandering Bedouins, who employ it in the chase of the antelope, and as a guard upon their tents and cattle. This species of greyhound greatly resembles, in its general form and character, the representations of canine animals on the ancient monuments of Egypt. As all the wild species have the ears erect, and as so many of the domestic races have these parts folded, or drooping, it has been inferred that this deflected character is the result of domestication. There are figures of greyhounds, and other dogs, almost invariably with the ears erect, on the Egyptian catacombs of the Theban kings, above three thousand years old; while the Greek sculptures of the age of Pericles, that is nearly a thousand years after the earliest pictures, only then began to exhibit a corresponding race with the organs of hearing half deflected. The ancient Persian sculptures of Takhti Boustan (of the Parthian era) represent no dogs with drooping ears. Colonel Hamilton Smith points out the only very ancient eastern outline of a dog with completely pendulous ears, in an Egyptian hunting scene, published by Caillaud, and taken, it is believed, from the catacombs above referred to. In this instance, however, it is not a greyhound, but a lyemer (*lymme*, a thong) or dog led by a leash or slip rope, the accompanying hunter bearing his bow in hand. He regards it as representing the Elymean dog, perhaps first introduced to Egypt by the shepherd kings, or brought home by Sesostris,

* *Naturalist's Library, Mammalia*, vol. ix, p. 184.

after his expedition to the Oxus. It may be said generally that the ears of domestic dogs were originally upright and pointed in all the races, with long hair and a sharp muzzle; half erect in those with similar heads but short hair, and pendulous in the blunter-headed kinds.

We may next notice, as in some measure allied both to the red dogs and Dholes, a remarkable wild species of Australia, called the New Holland Dingho,—*Canis Australasiæ* of recent writers. Some maintain that it is an imported species, and the very peculiar zoology of the great southern island where it now occurs does not discourage that idea. It is, perhaps, the only link among the larger quadrupeds which in any way connects the animal products of that country with those of other regions; and its anomalous character and conduct in its present locality has been deemed an argument in favour of its being regarded as an imported rather than an indigenous species. Of this, however, there is no proof, either direct or traditional; and, in the meanwhile, we find it where it is, with all the essential attributes of a wild animal. It is found over all Australia, so far at least as we have actual knowledge of that *terra fere incognita*, and hunts either in pairs or in small families of five or six together. It is a large and powerful creature, not less active than ferocious, and when attacking sheep it seems to delight in killing as many as it can, more from an inconsiderate wantonness than the cravings of natural hunger. At a station called New Billholm, about 170 miles back from Sydney, one of them slew fifteen fine ewes in a single morning. When Van Dieman's Land was first colonized by European shepherds, the flocks there also suffered greatly; and such was the strategy, as well as fierceness of the wild dogs, that neither guards nor watch-fires had much effect. Twelve hundred sheep and lambs were carried off or destroyed, in one settlement, in three months; seven hundred in another.

When these wild creatures fall in with domestic dogs, they immediately devour them; and in such onslaughts they are much more courageous than wolves, in so far as they will follow sporting dogs, no doubt from the most malign of motives, almost to their master's feet. A Dingho, brought to England, the manners of which were presumed to have been greatly ameliorated by a long voyage, was no sooner landed than it sprung upon an unsuspecting ass, and would have destroyed it on the spot, had no one come to the rescue. Another, which was kept in the *Jardin des Plantes* of Paris, would rush at the bars of cages, even when he saw that the inmate was a jaguar, a panther, or a bear—each of them naturally more than his match wherever there was a fair field and no favour. In confinement, these animals have been described as

being for the most part mute, neither howling, nor barking, nor giving utterance to their feelings through any other medium than their teeth. Several individuals have existed in the gardens of the Zoological Society of London for many years, and have never acquired the bark of the other dogs by which they are surrounded. Mr. Youatt, however, informs us, that when a stranger makes his appearance, or when the hour of feeding arrives, the howl of the Dingho is the first sound that is heard, and is louder than all the rest*. We know that, in a state of freedom, they give forth, from time to time, a prolonged and melancholy cry. In spite of their savage nature, it seems that they bear a strong affection for each other—a good sign surely both of man and beast. For example, Mr. Oxley, Surveyor-general of New South Wales, records as follows:—

“About a week ago we killed a native dog, and threw his body on a small bush: in returning past the same spot to-day, we found the body removed three or four yards from the bush, and the female, in a dying state, lying close beside it; she had apparently been there from the day the dog was killed. Being so weakened and emaciated as to be unable to move on our approach, it was deemed mercy to despatch her†.”

We may add, that the Dingho has been domesticated by the natives in their own wild way, and aids them in the chase of the emu and kangaroo. It is said to breed less easily with the common dog than the latter does with the wolf, although occasional unions have taken place. The mixed race retains much of the wild habits of the Dingho. Professor Low possesses a female which produced a litter to a common dog. The progeny were handsome and playful, but by no means remarkable for docility. They inherited the natural disposition to dig in the ground, as if desirous to burrow, and, when mere puppies, began to attack poultry; a habit which never could be cured‡. Many of our readers may have seen a fine example of this mixed breed in the Edinburgh Zoological Gardens.

We do not deem it necessary to add to the foregoing examples of the existence of sufficiently well-authenticated wild animals of the canine race, distinct from each other, and living in a state of nature more or less remote from man and man's dominion. We have many more at our command, but the subject is clear enough without them. We think it cannot be doubted that the dog, viewed in the complex and multifarious states in which it now exists, each in its own way so wisely subservient to one or other

* The Dog, p. 20.

† Journal, &c. p. 110.

‡ Domesticated Animals, p. 650.

of the exigences of its human lord and master, has not been derived originally either from any one wild species, like the wolf, or more directly from any single reclaimed stock, like the shepherd's dog. The vast and varied range of character, mental and physical, which the domesticated kinds exhibit, demands, as it were, a more comprehensive as well as complicated origin; and even when we keep in view the obvious relationship which the natural features of many of the subdued races bear to those of their wild allies, it is still extremely difficult to account for the origin of many of our peculiar breeds. But, of course, the difficulty is not only greatly increased, but rendered altogether insuperable, by assuming a simple rather than a complex source.

We must bear in mind, that canine animals being more completely under the dominion of man, and more personally attached and devoted to him, than any other beings, they have experienced greater modifications in form and habits, in consequence of that subservience, than any others. The great migratory movements of different tribes of the human race, each carrying with it one or more established kinds, into climes and countries in some measure foreign to their original constitution, would naturally produce crosses from casual contact with other kinds; and the offspring of such unions, as well as the parents which produced them, still acted on by the physical influences of each locality, the amount and nature of their food, the habitual modes of life of their human masters, and the nature of the education bestowed upon them, whether by precept or example,—these and other circumstances would constantly tend to increase the range of natural variation, till the different ends of the scale came, at last, to exhibit creatures of such different external and instinctive characters, as to give them the semblance of having little or nothing left in common. It must also be borne in mind, that not only is an individual dog capable of being highly instructed in his own vocation, but that his intellectual attributes, as we may call them, become so deeply incorporated, as to descend by inheritance to after generations, each bearing within it the same impressible nature, with a similar power of handing down to posterity a still more refined and delicate instinct, proportioned to the accomplishments it may have itself acquired both by descent and tuition. Hence the value of what are called *breeds*, and the almost unfailing instincts with which certain well-born dogs enter on their calling, even in earliest life, and perform their proper and peculiar functions from the very first, with scarcely any instructions from their masters. When symmetrical corporeal forms, and improved or more accommodating instincts, are thus capable of being communicated by inheritance, and when the immense advantages arising to ourselves from a

judicious selection or careful combination of similar or dissimilar kinds is kept in view, it is not difficult to conceive how, in the course of ages, very distinct and strongly contrasted varieties should not only originate, but continue and increase.

We admit that this intermixture of originally distinct species, such as wolves, wild dogs, jackals, and others, and the productive union of the hybrid offspring with each other, is opposed by a physiological dictum maintained by many, and among others by the illustrious John Hunter, certainly one of the greatest of philosophical anatomists,—to wit, that mule animals, or the descendants from two distinct kinds, are not themselves prolific. This *law of nature*, it is maintained, has been instituted with a view to prevent that confusion which would arise from the intermingling of species in a state of nature,—a confusion speedily checked and extinguished, should it by chance occur, by the barrenness of all hybrid animals. We should be extremely sorry to oppose any law of nature, and do not mean to do so at this or any future time; but with the facts before us already stated, and many more *in retentis*, we maintain that, at least as respects dogs, it is not a law of nature at all. As we cannot bend facts, and do not desire to demolish them, in order to suit a theory to which they are resistant, we must give up the theory itself, by whomsoever it may have been maintained. In doing so, we of course leave others to form their own opinion from the facts adduced, merely reserving to ourselves our liberty of conscience and right of private judgment, being unwilling to be coerced against our own convictions by any “mighty Hunter,” or the dogmatical repetition of the same sentiment by others of less renown. We believe that in the unreclaimed state, although the so called law is not imperative, the practical result is so far conformable, that hybrid animals, themselves extremely rare, either do not breed at all, or, if they do, both they and their progeny speedily disappear, in consequence of their mixed characters being absorbed, as it were, by the prevailing mass of one or other of the parent kind around them. They form no “tyrant minority,” and soon cease to exercise any influence whatever on the normal or unmixed blood by which they are encompassed. But in a state of domestication the condition of affairs has undergone a change from the voluntary and natural to the forced and artificial; and, all surrounding circumstances being in favour of the encouragement of hybrids, they consequently increase from age to age, instead of becoming almost immediately extirpated.

It cannot be doubted that the subjugation of the dog, from whatever source, was effected at a very early period of the history of man. Indeed, there is no period of that history, except the

earliest, in which we cannot trace him as more or less the friend and ally of the human race. Along with the bull, the ram, and the goat, his companions in servitude, we find him represented not only as a sign in the heavens, but honoured by a place in either hemisphere, first beneath the feet of the southern Orion, and again more northerly as indicating Sirius, the brightest of the fixed stars, the heliacal rising of which, corresponding to the full swelling of the Nile, marked the commencement of the Ethiopian and Egyptian year. His form is exhibited on the most ancient monuments of human art, in the sombre excavations of the early Indians, the mysterious chambers of the great Nilotic sepulchres, the now ruined glories of Persepolis. He was not only sculptured, but consecrated, sacrificed, even adored, by many nations, and forms a frequent feature in the mythological systems of ancient Greece and Rome. But one remarkable exception occurred in early times, which has no doubt materially affected the condition of many of the existing canine races over a large surface of our globe. The worship of the dog was interdicted to the Jews, under the most dreadful denunciations; he was proclaimed to be unclean; and even the price which might be obtained for him was classed with the wages of sin, and was not to pollute the temple of the living God*.

"The people of this family," observes Professor Low, "adhering to the letter of their stern laws amidst all the fortunes of their unhappy race, even now entertain much of their ancient feelings towards this gift of Providence. Nay more, the Arabs, taught by an impostor, who derived much of what he taught from Jewish usages, have conceived something of the same feelings towards this creature. But the Arabs cannot dispense with the services of the dog amid their own wild deserts of sand, and much less when they have passed beyond them; and all the restraints of superstition have been unable to prevent the freest use of the dog in the countries to which the Arabian faith has extended. Yet everywhere, in countries of Mohammedans, the dog is regarded as something unhallowed and unclean. The true believer, indeed, will not shed the blood of the dog, but he will not afford him the shelter of his dwelling, nor admit him to that companionship for which Nature has fashioned him. Hence, in Mohammedan countries, the dog rarely assumes that docility which he elsewhere possesses; and hence much of that multiplication of unowned dogs in eastern towns, which live on garbage, and share with the hyænas and vultures the task of removing impurities. This, indeed, is

* The student of Scriptural Zoology will no doubt also bear in mind the fact, that while in the Sacred records frequent mention is made of nets and snares, and of the pursuit and capture of wild animals, there is no allusion throughout the whole of the Jewish history to the use of *dogs* in hunting.

due only in part to Mohammedan feeling; for we know that something of the same kind existed from the earliest times in the countries of the East, even in Egypt, where the dog was venerated, and in Greece during the ages termed Heroic. It is generally believed that the Hindoos have acquired the feelings of their Mohammedan tyrants towards the dog; but this is an error. The Hindoos, like other people of the East, have numerous unowned dogs in their towns; but, although they are restrained by feelings connected with their ideas of the sanctity of food from admitting the dog to that familiarity which is customary with us, they have a great fondness for him, in which respect they resemble all the other members of the Caucasian family not Mohammedan. It is the Jews and Mohammedans alone who regard this animal as something unhallowed; but it is not they alone who vilify their enemies as dogs and the sons of dogs; for the people of all countries, even those who profit the most by the services of the animal, employ expressions of hatred and contempt, founded on what they conceive to be the most vile and hateful in his attributes. His greediness, his uncleanness, his impudence, his quarrelsome temper, nay, his submission and fawning, have furnished us with epithets wherewith to insult one another. The cause, perhaps, lies no deeper than this, that the dog, living in our society, we are able to observe his habits and customs, and perhaps to find in them too faithful a similitude of some of our own. Were monkeys to live amongst us, we should doubtless be able to find in them similar traits of character which we might apply to our neighbours, and so be as ready to speak of the son of a monkey as the son of a dog*."

It is not our intention to enter at this time into the detailed history of the domesticated breeds. Some knowledge of that history may be sought and obtained, so far, at least, as books can give it, from the works named at the head of this article, and from others which we need not name. We shall conclude with another extract from the volume last quoted, and already noticed by us more at length in a preceding Number.

"But of all the attributes of the dog, those which seem the most to have claimed attention, are his attachment to man in general, and his fidelity to individuals in particular. The dog very rarely, and never but under peculiar circumstances, seeks to gain his natural liberty. He prefers to the state of freedom the protection of man, and lingers near our dwellings even when he is shunned and disowned by us. When he attaches himself to any one, all his actions indicate that the relation is one which has a foundation in the affections of the animal, and does not vary with the degree of

* Domesticated Animals, p. 668.

benefits conferred. The dog that shares the lot of the miserable and poor, is no less faithful than another that enjoys all that can gratify the senses. The peasant boy, who rears up his little favourite in his cabin of mud, and shares with it his scanty crust, has a friend as true as he who has ease and abundance to bestow. Release from the cord of the blind beggar the dog that leads him from door to door, and will he follow you a step for all with which you can tempt his senses? Confine him in your mansion, and feed him with the waste of plenteous repasts, and let his forlorn companion approach your door to crave a scrap of food, and the dog will fly to him with fidelity unshaken, and bound with joy to be allowed once more to share his miserable lot. Again and again has the dog of the humblest and poorest remained faithful to the last, and laid himself down to die on the grave of his earliest friend.

“Recently, a poor boy in a manufacturing town had contrived from his hard earnings to rear up a little dog. The boy, as he was passing along to his daily work, was struck down, and dreadfully maimed, by the fall of some scaffolding. He was carried on a shutter, mangled and bleeding, to an hospital near, attended by the dog. When he was brought to the door, the dog endeavoured to enter along with him, but, being shut out, he laid himself down. Being driven beyond the outer gate, he went round and round the walls, searching for any opening by which he could enter. He then lay down at the gate, watching every one who entered with wistful eyes, as if imploring admittance. Though continually repulsed, he never left the precincts night or day; and even before the wounded boy had breathed his last, the faithful dog, struck with total paralysis, had ceased to live. It is well known that the soldiers of the French levies were often mere boys, brought from their country homes to undergo at once all the rigours of the service. They were often accompanied by their little dogs, who followed them as best they could. Often, after the carnage of a desperate field, these dogs have been found stretched on the mangled bodies of their youthful friends. A French officer, mortally wounded in the field, was found with his dog by his side. An attempt having been made to seize a military decoration on the breast of the fallen officer, the dog, as if conscious how much his master had valued it, sprang fiercely at the assailants. An unfortunate soldier, condemned for some offence to die, stood bandaged before his comrades appointed to give the fatal volley, when his dog, a beautiful spaniel, rushed wildly forward, flew into his arms to lick his face, and for a moment interrupted the sad solemnity. The comrades, with tears in their eyes, gave the volley, and the two friends fell together. A youthful conscript, severely wounded in the terrible field of Eylau, was carried to the

hospital amongst hundreds of his fellows. Many days afterwards, a little dog had found its way, no one knew how, into the place, and amongst the wounded, the dying, and the dead, had searched out his early friend. The fainting boy was found by the attendants with the dog beside him licking his hands. The youth soon breathed his last, and a kind comrade took charge of the dog: but the animal would take no food, pined away, and shortly died. And a thousand other examples might be given of an affection in this creature unaltered by changes of fortune, and enduring to the last*."

Who has not heard of the unfortunate pilgrim of Helvellyn, and of his faithful dog—faithful even in death—immortalized alike by the Bard of Chivalry and the Laurel-honouring Laureate? We entirely concur with Mr. Youatt in his opinion, that while poverty may drive from a cold hearth many a companion of our happier hours, it was never known to diminish the love of one canine attendant.

FEEDING HORSES AND HOUNDS.

By CECIL.

[From the Farmer's Magazine.]

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THE high price of horse corn during the past year has been a fruitful stimulus to justify every endeavour to adopt, if possible, a cheaper substitute, or a means of introducing economy. Thoroughly established, however, is the fact, that nothing has hitherto been discovered of comparatively equal value with a due proportion of oats and hay for the production and preservation of condition in the equine tribe.

Whenever new theories are proposed, it becomes necessary to advance some evidence, at least, bordering upon practice, to recommend their utility; but when a system has been pursued for years, and with the utmost success, it appears to be a matter of surprise that good examples should not be universally adopted. By the simple process of crushing or bruising oats before they are used as horse corn *the saving is immense*; and although the plan has been carried on by many, and is still persevered in by most, if not all of those who ever commenced it, it is by no means universal.

Fifteen years ago, when coach travelling was in its zenith, and

* Domesticated Animals, p. 693.

coach proprietors vied with each other, not only in the acquirement of fortunes but also in the condition of their stock, one of the most influential, spirited, and intelligent horse-masters in the kingdom, residing in one of the midland counties, and whose highly conditioned teams were the pride and boast of the roads between Birmingham and Sheffield, as also in many other directions appertaining to that locality, introduced the custom of bruising the oats consumed by all his horses with the greatest success. It may be as well to observe, that he is a man who would not be influenced by prejudice, or permit his intentions to be frustrated by the caprice or disinclination of servants; neither is he one who would have continued the custom, which he has done, had he not been convinced of its advantages.

* * * * *

Having written lately to a friend to inquire the result of his experience on the subject, and who was formerly a very extensive coach proprietor, as well as breeder of thorough-bred stock, his reply is to this effect:—"I did not crush my oats for coach-horses, not because the system was a bad one, but solely on account of want of room. I always very highly approved the plan, and invariably crushed *all* my oats at the shed farm, and pursue the same plan at present. *I am quite sure that one-fourth less oats will produce more satisfactory results if they are bruised than if they are given whole.*"

* * * * *

Should it not be inquired, why bruised oats are not used for race-horses? That the custom is not adhered to in training stables is well known; is it not in consequence of the ancient usage of giving them whole that the most celebrated trainers have not introduced it? That hunters do better with them so prepared no question remains in doubt; and I can corroborate the statement made by my friend in his letter, that *a saving of full one-fourth is accomplished*. It must be observed, they should not be ground to flour, but simply *bruised*; which may readily be done, as they are required for use, by one of the numerous machines which are offered to the public for that purpose.

Prejudice has, doubtless, operated materially against the universal practice in this instance, as it has often done on many other equally beneficial occasions; and there are persons who contend that, although many oats may pass through the horse in an undigested state, the stomach of the animal has extracted the nutritive properties. Two well-known facts will, it is to be imagined, at once controvert such an opinion. Oats which have been voided in that state will grow, and poultry and other birds of the air will thrive

upon them; they must, therefore, contain the elements of vegetation and nourishment.

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Opponents to the practice of bruising oats contend that, by so doing, the powers of mastication are not so energetically called forth; and, therefore, that the saliva is not carried with the food into the stomach in such quantities as when the corn is presented whole. But it would appear from an anecdote related by Dr. Paris in his "Treatise on Diet," that the process of mastication is not necessary to the flow of saliva; for that, in the case of a felon who cut his throat in prison in such a manner that, although it did not immediately destroy his life, caused the food when introduced into his mouth to escape by the external wound, it was found that during each meal there was a discharge of saliva from the mouth amounting to five or six ounces, or more. The sensation in the mouth created by the sight of, or sometimes even by anticipation of, any relishing delicacy, is well known. Yet, even if mastication be essential to the promotion of the flow of saliva; if the oats are only just bruised or cracked—not ground to flour—the horse's masticatory powers will be thoroughly brought into action, and each mouthful of oats duly saturated before they can pass into the stomach; for it seems to be one of the wise ordinations by which animal economy is governed, that food shall not pass down the throat in a dry state. Take, for example, a piece of bread or biscuit into the mouth when it is extremely parched by thirst, and all the chewing and mastication in the world will not enable you to swallow it until it is moistened either by a flow of saliva or a portion of fluid.

Herbaceous animals swallow more air with their food than carnivorous ones; that is, they require more saliva for the process of mastication and deglutition, and that saliva contains a great portion of air, which may be understood by its frothy appearance, each little bubble being filled with air, and by that means a quantity of oxygen is conveyed into the stomach with the food. On this account it is a most mistaken practice to wet the corn for a horse before it is put into his manger. The food which an animal takes into its stomach becomes soluble, in which state it enters into the circulation. The oxygen of the air, and the fluid secreted by the coat of the stomach, produce this result. Physiologists have decided this to be the case, and that it is a chemical action free and independent of vital force. The gastric juice seems to possess a most extraordinary power in dissolving or digesting all kinds of food; a power which no other fluid possesses, be it water, acid, or alkali. It appears, however, that the power and quality are somewhat dimi-

nished by water being presented immediately before or after feeding; a custom prevalent at inns, but one which cannot be too scrupulously avoided.

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When taking into consideration the subject of feeding hounds, it must be observed that the canine species partake of a twofold nature: they are partly carnivorous, and partly graminivorous; the latter condition being possibly, in some measure, the effect of domestication. The constituent properties of bones may be employed as food for hounds, the element of which is gelatine; but it is said to be incapable of conversion into blood. How bones afford nourishment physiologists do not appear to have discovered; nevertheless they have determined that the constituents of certain kinds of food possess the means of supplying different functions of the animal economy; some through the circulation of the blood to form muscle, fat, and various tissues; others affording nourishment to the liver, and augmenting the secretions of bile, and others acting on the urinary organs; some have also a decided effect upon the functions of respiration. Animals which feed entirely on grain generate more bile than the carnivora; it is formed from their food. This is worthy of attention where kennel lameness exists, as a deficiency of bile generally prevails where that malady rages. The presence of soda is necessary to the formation of bile; and it has in some cases been administered as a remedy for kennel lameness with partial success. Soda is stated by chemists to be formed from the food of graminivorous animals; and it is well known to all those who have seen any thing of kennel lameness, that it is necessary to diminish the quantity of flesh, and supply the afflicted hounds with more pudding. This malady has been a very troublesome one in many establishments, although it does not appear to be so bad as formerly; and with careful investigation into its various causes there appears to be little doubt that it may be altogether exterminated, or remedies found for its cure. Nothing will tend so effectually to these purposes as careful dissections of such as may be afflicted with it, and food given to their survivors most likely to counteract the symptoms which, on *post mortem* examinations, may be present. Nothing has hitherto been discovered equal to oatmeal, with a proportion of horse-flesh, as the ordinary food of hounds; and, if properly prepared, perhaps no other grain will be found cheaper: but on this head so much depends on the boiling of it. The starch contained in the oat is one of the principal sources from which nutriment is derived: the more, therefore, the oatmeal is boiled, the greater quantity of that nutritive element is produced; and it is on this point that the

great difference in the consumption of various kennels depends. Five tons of meal will keep from twenty to twenty-five couples of hounds, with a sufficiency of flesh, a year; but if it is not half-boiled, double that quantity will scarcely suffice: in fact, in a half crude state, hounds will never thrive upon it.

Indian corn has been tried, but I apprehend without success. Some years ago it was introduced into the Worcestershire kennels; but every Worcestershire man of that day will attest its failure. I have heard that in Mr. Selby Lowndes's kennel it was used last season and approved of; but last season was scarcely a sufficient test—for all hounds were compelled to lie idle during more than half of it. In the summer it may do; and from what I have seen of it during that period, I should feel disposed to recommend it; but when cub-hunting commences I should return to oatmeal. It has, I understand, also been used at Rome for the hounds which Lord Chesterfield took there; but that is no argument for its applicability in England during the winter season, though it may in reference to its use in the summer. The reason is manifest: there is less oxygen in the air during summer than winter, less in Italy than in England; and Indian corn is one of those seeds which produce a decidedly favourable influence in the formation of fat, for which M. Liebig is my authority; and every master of hounds who regards the condition of his pack (and where is there one who does not?) will seek that food which has the effect of producing muscle instead of fat. All the attention that can possibly be bestowed on hounds in or out of kennel, whether as it regards exercise or other minutiae, will be useless, unless they are supplied with food suitable to their constitutions.

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The importance of walking hounds out in the grass court after feeding will be collected from these remarks: it not only affords them an opportunity of relieving their bodies, but they are enabled to inspire pure air, containing its utmost amount of oxygen, far superior to that which they acquire in a lodging room, where, lying crowded in heaps on their beds, the surrounding atmosphere is contaminated by their own expirations and the exhalations from their bodies, which, combined with other causes, are fruitful sources of kennel lameness.

Although barley has been introduced into some kennels, it is never likely to be used to any extent. The nutritive properties of this grain consist of mucilage, gluten, and sugar: when used for kennel food, it must not be boiled, but simply scalded as it is wanted, for the saccharine principle very soon establishes an acetous fermentation—one of the causes of its inapplicability for the purpose of

feeding hounds; another, that the bran contains an acrid resin, prejudicial to the delicate intestines of the canine species. It is generally known the sympathy which exists between the intestines and the skin of animals; and the above reason will account for the roughness of coat and irritation observable in dogs fed with barley-meal. In these times of scarcity there may be some difficulty in procuring oatmeal from the ordinary dealers, uncontaminated by a mixture of other kinds of grain, such as barley, peas, or beans of an inferior quality, any of which must be very prejudicial, inasmuch as the boiling process which oatmeal requires will produce an adverse effect on the intrusive barley. Peas generate too much carbonic acid gas to be admitted with impunity. This difficulty might surely be overcome by masters of hounds furnishing their own oats, having them dried, husked, and ground at the mills in their own neighbourhood; for although there are many districts in which making oatmeal is not commonly practised, there is no great secret or art required. The supply from Ireland, is perhaps, scarcely to be depended upon at the present period; but it is to be hoped the Patlanders will have better luck in future. Yet there is a vast quantity of excellent oatmeal made in Wales, from whence navigation and railways will convey the commodity to almost any part of the kingdom at a moderate charge. A most erroneous impression exists as to the number of hounds kept throughout England and Wales. There appears to be in all about one hundred different packs, somewhere about thirty of which hunt four, five, and six days in the week; the average number in each of their kennels may be estimated at from sixty to seventy couples: about the same number hunt three days in the week, whose average will be found under thirty-five couples: the remainder, among which are many of what are termed "scratch-packs," wherein not twenty couples are worked; but allowing their average to be twenty-five couples, this calculation will be over rather than under the mark.

ON THE ADVANTAGES OF STEEPING THE FOOD OF CATTLE IN WATER.

By M. BOUSSINGAULT.

MANY farmers make a practice of steeping their dry fodder before giving it to the cattle: in the opinion of these practical men, hay and clover acquire, by imbibing water, more nutritive properties. Twenty-five pounds of clover hay will absorb enough

water to make it weigh 100 lbs. after an infusion in water for twelve hours. It is therefore thought that by this means the dry fodder is again, in some measure, restored to the state of green food. It has been the general opinion that in the warm and dry state in which cattle are usually kept, moistened food would be more profitable than the dry hay with which they are usually fed when grass or fresh clover cannot be obtained.

It was the wish to decide this question which induced me to make a comparative trial for the purpose of observing the effect of steeping the food. I entrusted the details of this experiment to M. Eugene Opperman, who is studying practical agriculture under my care at Bechellbronne. Four heifers, aged 17 to 19 months, were divided into two lots; the one of these (No. 1) was fed with new land hay, No. 2 received the same food previously steeped in water twelve hours. Each lot received besides 3 lbs. of old land hay for each 100 lbs. of live weight. The following is the result of a trial of fourteen days :—

Food.	Weight at commencement.	Grain in weight.	Gain per day.	Weight after 14 days.	Weight of food consumed.
	lbs.	lbs.	lbs.	lbs.	lbs.
Steeped..	1604	51	$3\frac{1}{2}$	1655	624
Dry	1715	45	$3\frac{1}{4}$	1760	693

This experiment was then repeated, inverting the order of the lots, so that the moistened food was given to the heifers which had previously received the dry food. The result again obtained did not differ materially from that given above: it was as follows:— 1st lot, which had dry food, gained in fourteen days 51 lbs.; 2d lot, which had steeped food, gained in fourteen days 49 lbs. This slight advantage gained by moistening the food is so small as to cause a doubt that it may not be the result of an error in the experiment, and should it prove a real gain it is too small to repay the manual labour and trouble caused by steeping the food.

In the course of the experiment M. Oppermann observed that the cattle ate the moist hay more rapidly than the dry. The one lot consumed the steeped food in 45 minutes, whilst the other occupied an hour in eating their "ration" of dry hay. Greater rapidity of consumption may possibly, in some cases, be an advantage; for example, in fattening, when it is necessary to give as much rest as possible. No doubt, also, the soft moist food, by its easy mastication may be of advantage to very young calves when the milk is taken from them. In a word, dry hay, after it has absorbed two or three times its weight of water, ought to give the same ad-

vantage which we have in green food: the latter, if not more feeding than hay, is at least eaten more greedily. It is known that an animal on green food generally does better than when receiving only dry hay: and there may be instances in which similar results may be obtained by steeped fodder, if given under similar circumstances. Curious to know the influence which moistened food would have on milk cows, I engaged M. Oppermann to try an experiment on two cows as nearly alike as possible, which received (as in the previous experiment) 3lbs. of dry fodder, to each 100lb. of live weight in addition to the other food. The one cow received hay steeped as before; the other, hay in its natural state. After fifteen days' perseverance in the above regime, no difference could be perceived in the quantity of milk.—*Annalen de Chemie*.

It may not be out of place to remark that the author of this valuable paper has devoted himself with great earnestness to scientific agriculture. He has a large farm at Bechellbronne, in the south of France, where, with ample command of capital, aided by his extensive chemical knowledge, he pursues experiments in every branch of farming, and gives his results to the world in papers such as the above. His statements are received with great credit over the whole of Europe, second only to those of Liebig. With due respect, however, for such an authority, we were not prepared for results so totally at variance with the increasing practice of the best farmers and cow-keepers. It is difficult to understand how a practice involving both trouble and expense can spread if it be useless.

Connected with the improved farm buildings in the north of England and Scotland, is now always found a steam engine; the waste steam from which is used to steam turnips for the feeding of cattle. In many places apparatus has been erected for the express purpose of preparing the food by boiling or steaming. In the Lothians of Scotland, rye-grass is commonly allowed to stand for seed, and whatever portion of the crop is considered unfit for market is mixed with cut hay or straw, together with linseed cake, and then steamed. This is found to make an exceedingly rich food for cattle. Where many cows are kept, the steaming of all kinds of food is almost universal.—*Farmer's Journal for Sept.*

COURSE OF EXPERIMENTS TO DETERMINE THE EFFECT
PRODUCED ON THE GROWTH OF CATTLE BY
MIXING SALT WITH THEIR FOOD.

By the same.

IN my previous paper, "On the Effect of steeping the Food of Cattle," the results of which I had the honour to lay before the Academy, I mentioned that the animals received at the rate of 3 lbs. of hay per day to each 100 lbs. of live weight. This experiment has been continued without any change, except that the two lots of young cattle were not at all limited in their supply of hay, and received, besides, a moderate quantity of beet-root, daily. The weight each animal consumed was ascertained by placing a large quantity of hay within their reach every morning, and weighing the residue the next morning before giving them a fresh supply. In this case the weight of each animal is kept distinct, and the results shewn as under by the letters A, B, C, and A', B', C'.

On the 13th November, 1846, at the conclusion of the experiment described in the previous paper, the weights were as follow:—

Lot No. 1.		Lot No. 2.	
A weighed	330lbs.	A' weighed	292lbs.
B	316 "	B'	308 "
C	314 "	C'	304 "
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Total...	960lbs.	Total...	904lbs.

The experiment was commenced November 13th, and was continued until the morning of the 11th of March, 1847. During these 117 days between the above dates, Lot No. 1 receiving a portion of salt with their food, and Lot No. 2 receiving their food without salt; each lot consumed as follows:—

Lot No. 1, with salt, received of		Lot No. 2. without salt, received of	
Hay	lbs. 1,584	Hay	lbs. 1,406
Aftermath	1,880	Aftermath	1,740
Beet-root, 2,500		Beet-root, 2,320	
lbs. = hay.....	624	lbs. = hay.....	580
<hr/>		<hr/>	
Total...	4,088	Total...	3,726

As in the previous experiment, there was great difference in the quantity of water consumed by each lot:—Lot No. 1, with salt, drank every day eleven gallons of water. Lot No. 2, without salt, drank every day seven gallons of water.

This result, as well as the weights given in this paper, was ascertained by M. le Bel, who, during my absence from the farm, had the charge of the experiment. On the 11th of March, 1847, the following weights were obtained:—

Lot No 1, having consumed 24 lbs. of salt.					
Weighed 13th of March.		Weighed 13th of May.		Gain in 117 days.	
A	330lbs.	A	420 lbs.	A	90lbs.
B	316 "	B	400 "	B	84 "
C	314 "	C	416 "	C	102lbs.
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960lbs.		1,236lbs.		276lbs.	

Lot No. 2, without salt.					
Weighed 13th of March.		Weighed 13th of May.		Gain in 117 days.	
A'	292lbs.	A'	342lbs.	A'	50lbs.
B'	308 "	B'	428 "	B'	120 "
C'	304 "	C'	410 "	C'	106 "
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904lbs.		1,180lbs.		276lbs.	

The average weights between these dates being—For Lot No. 1, with salt, 1,098lbs.; and hay consumed per day, $35\frac{1}{2}$ lbs. For Lot No. 2, without salt, 1,042lbs.; and hay consumed per day, 32lbs.

It follows, that 100lbs. of live weight have taken in fodder—In Lot No. 1, with salt, 3·2lbs; in Lot No. 2, without salt, 3·1lbs.

This result, when the cattle had as much food as they could eat, shews the correctness of the estimate of 3lbs. to each 100lbs. of live weight, which was the basis of the first experiment. Indeed, I may say, after several years' observation, that the above has always been the result when the cattle have a full supply of food.

To resume. In this experiment we find that Lot No. 1, with salt, for each 100lbs. of hay consumed has produced in live weight 6·8lbs; that Lot No. 2, without salt, for each 100lbs. of hay consumed has produced in live weight 7·2lbs. We may, then, conclude that salt added to the food does not produce any appreciable effect in the growth of young animals; a result which, after all, ought not to surprise, even admitting the value of salt in food, since, by analysis, it was found that all the food the cattle received contained a certain portion, so that the animals were never without it.

By the analysis of the ashes of the food consumed by Lot No. 2, without salt, the following quantity was detected:—

In the hay, 9·5lbs were	3·8 oz. Troy.
In the beet-root, 7·5lbs. were.....	0·96 "
In 2·2 gallons of water were	0·32 "

Total..... 5·08 oz. Troy.

Thus each individual of that lot had in its fodder 5 oz. of salt every day, which appears to be a sufficient quantity for the purposes of digestion, &c.—*Annalen de Chemie*, May, 1847.

It is from such experiments as the above that we are to look for useful practical information. The conclusions which are arrived at from actual weight or measurement are such as to strike every one, and can scarcely admit of contradiction. A few years ago farmers were very strongly recommended to use large quantities of salt amongst the food supplied to their cattle. If any reliance is to be placed on the above experiment, it is unnecessary to do so, as Nature has herself furnished a sufficient supply. As we have no reason for thinking that the farm on which this experiment was tried was at all peculiar in this respect, we may conclude that the addition of salt to the food of our cattle is unnecessary. Liebig is of opinion that an excess of salt is injurious to the digestive organs of all herbivorous animals. On the other hand, it is only right to remark, that the writer is acquainted with a very extensive farmer who has, for several years, regularly supplied his sheep with salt mixed in their food.

Farmer's Magazine for Sept.

ON THE BREEDING OF CATTLE.

[From "The Farmer's Herald."]

THE higher breed the parent stock is, independent of being more valuable in itself, the more valuable must be the stock it produces; for the better breed an animal is, as a general consequence, it will be better shaped, and the better shaped it is, the less food will be required to keep it in condition. I would venture to add, that it would thrive better upon bad food than any cross-bred description you can find, however hardy at first sight the rough-looking animals may appear to be.

That which lies at the foundation of the improvement of every stock, or the successful management of it, is the fact—the common but too much neglected maxim—that "like produces like;" this is the governing law in every portion of animated nature; there is not a deviation from it in the vegetable world.

Let it be supposed that the cattle of a certain farmer have some excellent qualities about them, but there is a defect which lessens their value, and which he is anxious to remove. He remembers that "like produces like," and he looks about for a bull that pos-

sesses the excellence which he wishes to engraft on his own breed. He tries the experiment, and, to his astonishment, it is a failure. His stock, so far from improving, has deteriorated. The cause of this every-day occurrence was, that he did not fairly estimate the extent of the principle from which he expected so much. This new bull had the good point that was wanting in his old stock, but he, too, was deficient somewhere else, and, therefore, although his cattle had in some degree been improved, that was more than counterbalanced by the inheritance of the bull's defects. Here lies the secret of every failure, the grand principle of breeding.

What can a farmer expect, if he sends a worthless cow to the best-bred bull? or, on the other hand, if his cows, although they may have many good qualities, are served by a bad bull that perhaps he has scarcely seen, or whose points he had not studied, and whose only recommendations are that he is close at hand, and may be had for a little money? The question as to the influence of the sire and the dam is a difficult one to decide. That farmer will not err who applies the grand principle of breeding to both of them. In the present system of breeding, the most importance, and that very justly, is attributed to the male. He is a more valuable animal, and principally more valuable on account of the more numerous progeny that is to proceed from him, and thus his greater influence; and therefore superior care is bestowed on the first selection of him for rearing. The farmer studies the bull calf closely, and assures himself that he possesses in a more than usual degree the characteristic excellencies of the breed. When this care as to the possession of such combination of good points has extended from the sire to the son through several successive generations it may be readily supposed that he will possess them in a higher degree than the female can. They will be made, as it were, a part and portion of his constitution, and he will acquire the power of more certainly, and to greater extent, communicating them to his offspring. Custom and convenience, however, induce the generality of breeders to look most to the male.

The man of judgment will not, however, too long confine himself to his own stock, unless it is a very numerous one. The breeding from close affinities—the breeding in and in—has many advantages to a certain extent. It may be pursued until the excellent form and quality of the breed is developed and established. It was the source whence sprang the cattle and sheep of Bakewell, and the superior cattle of Colling; and to it must be traced the speedy degeneracy—the absolute disappearance—of the new Leicester cattle, and, in the hands of many an agriculturist, the impairment of constitution and decreased value of the new Leicester sheep, and the short-horned beasts. It has become a kind of prin-

ciple with the agriculturist to effect some change in his stock every second or third year, and that change is most conveniently effected by introducing a new bull. This bull should be, as nearly as possible, of the same sort, coming from a similar pasturage and climate, but possessing no relationship, or, at most, a very distant relationship, to the stock to which he is introduced. He should bring with him every good point which the breeder has laboured hard to produce in his stock, and, if possible, some improvement—and especially if the old stock have any defects, and that most essential of all qualifications, a hardy constitution, should not be wanting. There is one circumstance, however, which the breeder occasionally forgets, but which is of as much importance to the permanent value of his stock as any careful selection of animals can be, and that is—good keep. It was judiciously remarked by the author of the “Agricultural Report of Staffordshire,” that “all good stock must be both bred with attention and well fed. It is necessary that these two essentials in the species of improvement should always accompany each other, for without good resources of keeping, it would be in vain to attempt supporting a capital stock.” This is true with regard to the original stock. It is yet more evident when animals are absurdly brought from a better to a poorer soil.

The proper age at which the process of breeding may be commenced will depend on various circumstances. Even with the early maturity of the short-horns, if the heifers could be suffered until they were two or two-and-a-half years old, they would become larger and stronger, finer and more valuable, and their progeny would be larger and stronger. The custom which at one period was beginning to be so prevalent in the breeding districts, of putting the heifer to the bull at one year old, as well as at an earlier period, cannot be too much reprobated. At the time when they are most rapidly growing themselves, a sufficient quantity of nutriment cannot be devoted to the development of the foetus, and both the mother and the calf must inevitably suffer. That which has been said of the best age for beginning to breed in the cow will equally apply to the bull. It is absurd and dangerous to begin to use him, as some have done, when a yearling. He will come into season at two years old—he will be better at three; and although the farmers may not deem it prudent to keep him more than two or three years, he may then be sold advantageously, in his full prime, to another breeder.

I now come to the food for the cow when she is in calf, and a more important and profitable subject cannot engage our attention. I will begin with the foetal condition of the animal, and take a calf as a general example. It, like all other animals, is supported and

nourished by the blood circulating from the mother through its own body from the moment of its earliest formation up to the time of its birth.

To nourish the young animal in the womb of its mother, an additional quantity of food must be given, and this quantity must be increased as the state of pregnancy advances; and the kind of additional food must readily supply the materials of the growing bones and muscles of the fœtus, and contain a larger quantity of starch or sugar, also, than the mother in her ordinary state would require. This is required by the circumstance that the mother must now breathe for herself and her young—the quantity of blood is increased, more oxygen is taken in by the lungs, and consequently more carbonic acid is given off. A certain preparation of bone and muscle also must be supplied to the young animal by the food given to the mother, or the bones and muscles of the mother herself will be laid under contribution to supply it. This must be effected by the quantity of phosphates, gluten, fibrin, or casein, which are given in the food with which the mother is fed. An animal thus kept will be in the most profitable condition to rear its young; and bear in mind, that as the calf grows rapidly, the food it requires increases daily with its bulk, and the demands upon the mother every day become greater. If, then, adequate supplies are not given, a portion is daily taken from her own substance, which causes her to be lean and feeble, and her young stunted and puny in its growth.

John Bryer, Furness Farmers' Club.

THE REVISION OF THE BY-LAWS CONSIDERED.

By A PRACTITIONER.

Sir,—ALTHOUGH not a M.R.C.V.S., I beg, through the medium of your excellent periodical, to congratulate the members of the veterinary profession on the recent revision of the By-laws, particularly as relating to the apprenticeship clause; and, to shew the necessity of such an alteration, I will give you a case in point.

A young man left this country in the beginning of January last, and entered himself as a pupil of the Edinburgh Veterinary College: he remained there about a week, and returned home. In the month of May he opened a veterinary and horse-shoeing establishment, and issued a circular, from which the following is an extract:—“Having last year attended Edinburgh Veterinary College, and paid particular attention to the Diseases of the Foot and Leg, and

also to Shoeing on scientific and approved principles. I hope to remove the defects so long existing in this line in ———.” I think, Sir, you might couple this with the article headed “American Modesty in Veterinary Surgery,” in the June number of THE VETERINARIAN. This young man has never served *any* time to a practitioner of the veterinary art, nor has he had any opportunity of becoming acquainted with the treatment of horses; he has remained at home all the past session, but purposes going to Edinburgh at the commencement of the next session, and remaining there to the end, and presenting himself for examination for a diploma as one having attended *two sessions*, as required by the rules of the College. Now, Sir, I myself, have served an apprenticeship to a graduate of the R.V.C., since which I have been nearly thirteen years in practice; for nearly five years I had charge of one of the largest horse establishments in the north of England, and was for some time afterwards partner with a graduated veterinary surgeon; and although my employers have never expressed any dissatisfaction, yet I am anxious to become a M.R.C.V.S., and I had nearly made my arrangements with a person to attend to my practice whilst walking one of the Colleges this ensuing session; but if a person utterly ignorant of any thing relating to the treatment of horses will be allowed to leave the College, dubbed a veterinary surgeon, “qualified to practise the art and science of veterinary surgery,” in little better than five months’ study, for my part, I would prefer to remain without a diploma rather than submit myself for examination by a board that would make no distinction between the candidates for a diploma; but, at the same time, I do not mean to say that the Board of Examiners will not do their duty, nor do I impute any thing unfair to the worthy Professor of the Edinburgh College. I have had the pleasure of seeing him, and hearing him lecture, and I entertain a high opinion of him as a gentleman and a veterinary teacher. But, lest certificates should be accepted as proof of certain attendance and qualifications on the part of the pupil, I thought that a few words on the subject would not be out of place; and I trust, for the honour of the profession, that the candidates for a diploma, in future, will be *manually* tested on *practical* points. Excuse my signature, I dare say you will recognise the handwriting; you have had it on more than one occasion before, with my real signature; and I trust shortly will again, on another subject.

Your obedient servant.

THE VETERINARIAN, OCTOBER 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

THE science of HYGIÈNE, when applied to horses, presents to us two different objects: one being the preservation of health; the other, the attainment of condition. Abstract health is one thing; and what we call condition is another. A horse may be in health without being in condition; though he can hardly be said to be in condition if he be out of health. . Either condition is another kind of health, or it is a superlative degree of health: a sort of *ne plus ultra* of that state. It is not our intention here to enter at all into the important subject of condition; but simply to make a few observations on the preservation or maintenance of health, or, what in stable economy amounts to the same thing, the prevention of disease.

Drawing his breath exclusively through his nostrils, and that breath passing directly into capacious cavities and canals lined by a delicate membrane exquisitely sensitive in the cognizance of of odours of all kinds, and particularly obnoxious to offensive ones, the horse in his native plains and forests seeks the freest and purest air. Need we wonder, then, that when he comes to be fastened up in a stable, with many others besides himself, for several hours together, day and night, that, unless means be taken to furnish him with a renewed supply of fresh air, he lose his wonted good health, and fall into disease? No person was better convinced of this fact than the late Professor Coleman; and this it was that led him to make that thorough reform in the ventilation of the stables of our cavalry which has been followed by such manifestly beneficial results.

While every attention, however, has been given to ventilation, whereof the ostensible object has been to give exit to the respired and consequently heated and impure air, and full admission to such as was cool and free from such impurities, the *sources* whence the atmosphere of the stable has been rendered impure or conta-

minated have remained uncorrected. One great source of impurification is the *breath*. A dozen or twenty horses, standing side by side or croup to croup, require a continual renewal of the air presented to their nostrils: air lacking oxygen, and charged with carbon, cannot but be offensive, if not positively injurious, to the delicate sensitive membrane lining both the air-passages and lungs; to say nothing about the harm done the animal system through interruption to the requisite changes in the blood. Proper ventilation provides against this, and thus all mischief from such a source is anticipated.

But there is another source of impurity—if not a greater or more harmful one, still one of acknowledged evil, and one against which, so far as we know concerning it, there is every reason that we should endeavour to efficiently protect the animal—and that is, the effluvium from the urine and dung of the animal, and in particular the former. It will be said, perhaps, that drains carry away the urine, and that the dung is no sooner dropped than it is removed out of the stable. We would remind those persons, however, who may sit down satisfied that no harm can arise from such sources in stables which are drained and kept clean, that in these stables stench, even to a greater degree, is likely to be generated from the *dispersion* of the urine upon the floor—seeing that males and females cannot both stale through the same barred receptacle in the stall. And, even supposing such was the case, the cesspool underneath the barred grating never ceases to emit urinous effluvia, though such may be more evident immediately after staling, or any agitation of the contents of the cesspool, than at other times. In a stable where the drain and receptacle for the urine is behind the horse there must be necessarily a greater dispersion of the fluid upon the floor, and a corresponding amplitude of surface for unwholesome evaporation. The stable, however, which of all others appears to generate this urinous atmosphere is the one unfurnished with any drain or receptacle for the urine; wherein it is suffered either to diffuse itself over the flooring and disappear through being absorbed by the soil in the interstices of the pavement, or by the pores of the pavement itself (such as wood), or else through evaporation from the wetted unabsorbent surface. In either case urinous vapours will arise in abundance.

That the ammoniacal gas furnished by the urine of horses—to say nothing about any noxious effluvia their dung may emit—is of an injurious, if not a poisonous nature, no man will doubt who has ever in his life entered, the first in the morning, a stable containing several horses, the doors and windows of which have been kept all night close shut up: his eyes will not fail to convince him, should his breath and smell not inform him, of the ammoniacal noxiousness of the confined atmosphere. Supposing the windows of the stable had been opened, or that due ventilation had been afforded, undoubtedly the atmosphere would not have been of the same offensive description. Still, however, would the sources of such impurification have remained, the difference between the ventilated and unventilated stables being simply this—that, from the currents or circulation of air generated in the one which were wanting in the other, the atmosphere of the former would have been by so much the less contaminated with ammoniacal gases. But can ventilation, however effective, entirely free the stable atmosphere of such gases? Will the urinous surfaces and gutters cease to emit them? And would it not be more rational that we should look a little to the *fomes* of impurity rather than exclusively bestow our attention on ventilation? Does ventilation remove the stench from any corner of the street that may have been used by the passers-by as a place of urining? Rather, is not our nose sorely offended every time we pass a place of this description, even though it be completely out in the open air? Not that, for a moment, we would decry ventilation. At the same time we cannot but regard it as a matter not consonant with reason that we should devise every means of getting rid of a stench or impurity save that of removing or rendering unproductive the source of it. It is like a man who, having to sleep with a chafing dish of heated charcoal in his room, opens the window lest before morning he should be suffocated, when by putting out the charcoal fire he might have gone to bed without the slightest apprehension.

Thus much premised, it will be seen that the object of this article is to draw attention to a point in our stable economy which hitherto has had scarcely any consideration given to it, with the view that, by so doing, the dwellings for our horses may be exempt from the noxious component of the stable atmosphere

which ventilation only from time to time gives exit to along with the respired and heated air, without to any great or sufficient degree abating the disagreeable and harmful influence thereof. It is evident, that so long as the horses' excretions remain in the stable, they will continue to exhale noxious effluvia; the exhalation being great in proportion as the surface for it be extended, and the stable be heated. Drainage, however complete, can but abate the nuisance, not remove it; and when all things come to be considered, the question may be fairly entertained, whether drainage or a bibulous soil for the flooring of the stable the most palliate the evil. Drainage can prove effective only in situations where, through irrigation or the turning of a current of water on through the drains, they can be thoroughly washed out; and even here it is doubtful whether or not the urinous stench be completely destroyed. For our own part, we should say it was not, owing to the very bricks themselves composing the drains or flooring of the stable having become saturated with the urine constantly stagnant upon them for several hours together. The least bibulous material with which we have seen stables paved is *asphalte*, and, next to that, probably, the Dutch clinker: for this very reason, however, do surfaces so composed require still more frequent and thorough ablution; inasmuch as in the absence of this speedy and repeated washing, offensive exhalation is going on all day long from these unabsorbent, undrying surfaces.

Seeing, then, that we are hardly able in any way to accomplish the entire removal of the urinous exhalation—one great source of the impurity of the stable atmosphere, and yet, that such removal, or something tantamount thereto, is most desirable, what has been suggested is, that means be adopted to *neutralize* or to *suppress* such infecting vapours, and thereby, either to prevent the formation of or render harmless that which, when once formed, we have no completely effective means of getting rid of. In these days of invention of disinfectants there will be—there has, indeed, been—no lack of chemical offerings for the purpose of neutralizing or destroying the stable poison so soon as its nature or composition be made known. Mr. Ellerman, late Hanoverian Consul at Antwerp, has published a pamphlet, entitled “Disinfection.” Sir H. Burnett, also, has taken out a patent for chloride of zinc to be used

as a disinfectant. Likewise M. Ledoyen has laid a claim before Parliament, as being the discoverer of a disinfectant fluid. In reference to the latter, in *Bell's Pharmaceutical Journal* for last month (September) is the following :—

It—the report of the referees, Dr. Southwood Smith, Mr. Grainger, and Mr. Toynbee—“might have been summed up in a few words to the following effect :—

“We have made numerous experiments with the view of determining the effects of the liquid called *Ledoyen's Disinfecting Fluid*, which is represented to possess the properties,

1st. Of disinfecting water-closets, night-soil, and all fœtid animal substances and gases ;

2dly. Of disinfecting sailors suffering from fever, ships at sea and under quarantine, and patients suffering from infectious disorders and wounds ;

3dly. Of disinfecting hospital wards of miasma ;

4thly. Of preserving dead bodies, or parts of the body, for the purpose of dissection ; and

5thly. Of completely preventing the disease in potatoes.

The results of our experiments have shewn, that the disinfecting fluid readily effects the decomposition of sulphuretted hydrogen when brought in contact with that gas ; that it has no influence on phosphuretted hydrogen, and other noxious gases ; and that it possesses little or no antiseptic properties, and is therefore inapplicable for the preservation of animal substances from undergoing decomposition. We have obtained no evidence to shew the effect in destroying or decomposing miasma, or preventing the spread of infectious disease, nor has any evidence been given or obtained sufficient to prove that the fluid has any effect in preventing the disease in potatoes.

Having thus failed to verify the representations of the discoverers on the most important points, we proceeded to have an analysis of the fluid made, and find that it consists merely of a solution of nitrate of lead, in the proportion of one drachm of the salt to a fluid ounce of water.”

From *The John Bull* for September 4th, we learn that,

“The advantages which Mr. Ellerman offers to the public are—

1. The immediate and permanent disinfection of animal and vegetable matter, by decomposing the sulphuretted hydrogen and coagulating the albumen, thus preventing the escape of the poisonous exhalations arising from privies, drains, sewers, slaughter-houses, knackers'-yards, farm-yards, stables, dung-heaps, &c.

2. The purification and salubrication of towns : thus *perfecting the ventilation system*, and meeting the views of Government by improving the health of towns in England, as in the bill prepared and presented by Viscount Morpeth, Lord J. Russell, and Sir Geo. Grey.

3. The manufacture of azotized manure from the disinfected animal and

vegetable matter, for agricultural purposes and the fertilization of waste lands, through the application of this cheap and self-supplying source of unfailing production.

4. The manufacture of urea, extracted from the urine, which manure possesses the most fructifying qualification.

5. The preservation of dead bodies from putrefaction—and thus aiding the purposes of dissection.

The experiments made at Brussels were not of a private nature. The operations were performed in the presence of M. Liedts, the governor of the province, Count de Mevode, M. Duidal, M. Gerburt, the manager of the *Chambre*, the Commissioners appointed by the Medical Committee, editors of the public press, &c. A privy containing 8000 pints or 80 cubic yards was disinfected with 80 pints of re-agents, and half-an-hour afterwards the emptying was commenced in the presence of the abovenamed officers, without any one being able to detect the least odour. In France, knackers' yards near Paris, and at the very gates of Saumur, were disinfected. These places, the receptacles of an enormous quantity of putrid matter, carcasses of horses, blood, urine, night-soil, &c. &c., emitting the most disgusting and pestilential exhalations, were purified in the course of a few minutes; and these reservoirs, which were the pest of the neighbourhood, remain! So satisfied were the French and Belgian governments, as also the local authorities, that they have applied the process to all the public establishments belonging to the crown, the theatres, prisons, stables, hotels, &c. &c.

"We have been given to understand by a gentleman who is acquainted with Mr. Ellerman, and who takes a warm interest in the "health of towns" question, that he proposes shortly to make experiments, and intends to invite scientific and literary men to visit the operation. It appears that he has used several different kinds of re-agents, as well as a powder, which latter is highly useful for the *permanent disinfection of stables*, as it neutralises the escape of carbonetted ammonia and other volatiles.

"Would it not be advisable for the metropolitan and other sewage manure companies to avail themselves of this process to disinfect their sewage water and other manures? By this means the odour which many complain of would be effectually removed, and the value of the manure increased. It would also be wise *if the government and individuals were to have their stables disinfected by the process, as the ammoniacal vapours must greatly injure the health of horses*, who are in many instances compelled to breathe pestilential vapours in almost air-tight stables. We would also call the attention of Cattle Insurance Companies to so great a desideratum, as in many instances disease is to be traced to the vapours which exhale from the urine and dung of the cattle."

Acting on these hints, we have made it our business, by instituting inquiries in quarters wherefrom any information is likely to be obtained, and making such experiments as we could conveniently at

the moment put in practice, to ascertain, so far as we could within a short period of time, what properties these alleged disinfectants possessed when used in stables, and whether any and what amount of benefit was likely to accrue from their employment. It was suggested to us that we should make trial of the common oil of vitriol—*sulphuric acid*—in the stables, as a neutralizer or destroyer of the offensive odour. The prescribed method of using the vitriol was, that it should be diluted with nine parts of water, and that saw-dust thoroughly wetted with the mixture should be sprinkled over the flooring of the stables, those places being the most plentifully supplied which afforded any lodgment for the urine. This was done, and the result was more or less effervescence wherever the acidulated saw-dust came in contact with the horses' urine, with evident extrication of gas, and of that exceedingly offensive description that it became a question whether such gaseous emission was not likely to be even more obnoxious to the inmates than the urinous exhalation itself. What, however, rendered this discharge of gas most perceptible and unpleasant to us who were in the stable at the time was, the pouring of the acid and water mixture, without the saw-dust, over the flooring of the stable through a garden watering-pot. When thoroughly wetted in this manner, and the mixture had begun to soak into the soil between the crevices of the pavement of the stable, which had become super-saturated with urine—the deposit of years—the surfaces became everywhere covered with creamy effervescence, while the disengagement of offensive gas was so great that to hold our noses over the effervescing surfaces was, from the intolerable sour fœtor arising, next to impossible. On the following day the same acid watering was repeated, and for two successive days afterwards, the effervescence on each day being manifestly less, and a vitriolic or sour odour becoming prevalent over the sickening gaseous discharge which the first watering occasioned. Since this the stables have remained without any farther dressing, and the result has been such a complete super-saturation with acid that the ammoniated and urinous odours have been altogether suppressed. The vitriol used was the *brown*—the sulphuric acid of commerce—which, at the manufacturers, is purchaseable at about a penny a pound.

The next disinfectant of the stable brought to our notice was a rough impure sort of sulphate of lime, said to be a product in the manufacture of acetic acid, resulting in the decomposition of the acetate of lime used for that purpose. Instead of being white like *gypsum*, it had a dark cinder-like appearance, which was said to be owing to its having become impregnated with the tar coming from the wood (commonly *beech*) burnt on such occasions. We found it very pulverizable, and that its powder was dry and absorbent; we, therefore, deemed it best to sprinkle the flooring of the stables with it, the same as we would with so much sand, and the result proved very satisfactory. A box, used for sick horses, and which had been, from its faulty pavement (being very uneven and full of holes), noted for an offensive atmosphere, particularly in the morning when the litter was first taken out, was, after one pretty copious sprinkling, deprived *at once* of its offensiveness, nor has it, in the face of subsequent dressings, since returned. This sulphate of lime, to be procured at the acetic acid factories, is extremely cheap—a few shillings will purchase a cart-load—and it is, we should say from our limited experience, well worth further trial as a purifier of stables.

In regard to the nitrate of lead—used in solution, one drachm to an ounce of water—all we can say at present is, that it most assuredly possesses the power of correcting some horrible stench. We took some liquid out of a macerating tub in which the carcass of a dead dog had been for some weeks steeping, and, as may be imagined, hardly any thing could have exceeded its *fœtor* for offensiveness; and yet the solution of nitrate of lead effectually “sweetened” it, or, at all events, destroyed the horrible odour.

Such is a sketch of what we have read, seen, and done concerning the disinfecting of stables. Whatever plan or mode may be determined on as being the best suited or the most likely to accomplish so desirable an object, one thing appears certain; and that is, that, for the future, when we set about to “purify” stables, cow-houses, dog-kennels, &c. it will not suffice, as hitherto it has done, that a proper “system” of *ventilation* is established—No! we must get to the *root* as well as to the branches of this poison-bearing tree; and to the root as well as to the branches must our antidotes and purifiers be, in times to come, equally applied.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of September 8, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. PEECH (V.P.), W. J. GODWIN (Birmingham), CHERRY, sen., ERNES, SILVESTER (St. Albans), J. TURNER, HENDERSON, ARTHUR CHERRY, W. PERCIVALL, W. GOODWIN, and BRABY.

The minutes being read and confirmed,

The President stated that he called this meeting for the purpose of taking into consideration the course it would be best to adopt respecting the last communication received from the Home Office. He said that he had been strongly urged on this subject by several parties, and he himself thought that it would be desirable to consider this matter.

Mr. W. Percivall quite agreed with the remarks of the President, and thought that there could be no harm in making application to the Home Office for a copy of the Petition sent by the Highland Agricultural Society and Royal Veterinary College, praying for a new charter, and should move that the President be requested to apply to the Home Office for such copy.

Mr. James Turner agreed in these views, and seconded the motion of Mr. Percivall.

Mr. Gabriel supported this view.

Mr. W. Goodwin proposed that the question should be asked as to whether any steps were now in progress with respect to the granting of any new charter.

Messrs. Ernes and Braby considered that it was, in truth, paying more attention to the adverse petition than it deserved; but would not oppose the motion for requesting a copy; but would oppose most strongly any further application.

Mr. Arthur Cherry agreed in the view taken by Mr. Ernes, but at the same time thought that, as neither good nor harm would result from the application, he should support the first motion; but the mixing up of the second application would be decidedly injurious.

Mr. Peech adverted to what had passed between him and one of the Professors at the Royal Veterinary College, where he had called that morning; and as he felt it had a bearing on the interests of the body corporate he should mention it: from which it appeared that the object was to mislead the Council on the one

hand, and to make use of Mr. Peech for their own ends on the other; but this was politely refused.

The proposed addition to the application to the Home Office being withdrawn, the original motion was put and carried without opposition.

The letter from Mr. Lockie, complaining of the treatment he had received at the examinations in April last at Edinburgh, was again read, as also the reply from the Chairman of the Board of Examiners, in explanation of the course adopted in the case of Mr. Lockie; which explanation, by the direction of the Council, the Secretary had applied for, and which was now read; and the statement given being one that appeared to be valid, the Council could not take any steps in the matter beyond forwarding to Mr. Lockie a copy of the Chairman's explanatory letter.

A general discussion ensued, which ended in the motion of *Messrs. Ernes and Arthur Cherry*, "That a copy of the Chairman's letter of explanation be transmitted to Mr. Lockie," being carried without any opposition.

Mr. Arthur Cherry gave notice of two motions.

Adjourned.

[If the Professors are so anxious to know what is doing in the Council, why do they not attend in their places as members of the Board? The sittings are always open ones; there is no secrecy.]

The following is the Letter to which reference was made in our former report of the Proceedings of Council, in *THE VETERINARIAN* for August, p. 473:—

Sir,

Whitehall, June 26, 1847.

I am directed by Secretary Sir George Grey to inform you, with reference to my letter of the 10th November, 1846, that he has received a petition from the Royal Veterinary College of London and the Highland and Agricultural Society of Scotland, praying that a charter may be granted to the Royal Veterinary College of London and Edinburgh, and that this petition is under Sir George Grey's consideration.

I am, Sir,

Your obedient servant,

*Thomas Turner, Esq.,
President of the Royal College
of Veterinary Surgeons.*

S. M. PHILLIPPS.

August 11th, 1847.

GENTLEMEN WHO HAVE RECEIVED THE DIPLOMAS OF THE
ROYAL COLLEGE OF VETERINARY SURGEONS.

London.

Thomas Pratt, London.

Henry Priestman.

Josiah Martin Cullimore, Dublin.

George Yeomans, London.

Edinburgh.

Peter Forbes.

Gavin Clerk.

MISCELLANEA.

DISPOSAL OF A DEAD HORSE IN PARIS.

AFTER the horses are deposited, the mane and tail are cut off, which amounts to about a quarter of a pound; the skin is then taken away, which is disposed of to tanners, and used for various purposes; the shoes are sold for old iron, the feet are cut off, dried, and beaten, in order to make the hoofs come away, or are left to putrify until they separate of themselves, when they are sold to turners, coach-makers, manufacturers of ammonia and Prussian blue. Every morsel of fat is picked out and melted, and used for burning by makers of enamel and glass toys, greasing shoe leather and harness, and manufacturing soap and gas. *The workmen choose the best pieces of the flesh to eat*, preferring that about the head, and sell the rest for dogs, cats, hogs and poultry. It is also much used for manure, and making Prussian blue. The bones are disposed of to cutlers, fan-makers, &c., and often are made into ivory black; and also occasionally serve as fuel for melting the fat, and for manure. The sinews and ligaments are sold to glue makers, the small intestines are made into coarse strings for lathes, &c., or sold as manure.—*Era.*

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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, M.R.C.S. and V.S.

[Continued from p. 548.]

TREATMENT OF NAVICULARTHRITIS.

THERE is no description of lameness in horses concerning which unprofessional persons feel themselves so much puzzled as about "navicular disease," as it is called. They cannot understand how a horse's lameness should be "in his foot," when, at the same time, that foot exhibits to their eyes all the outward and visible signs of health—that it is, in fact, what they would call "a good foot." Neither is it an easy matter to explain to persons unacquainted with the anatomy and physiology of that beautiful but complex piece of animal structure, the horse's foot, how all this comes to pass. And less satisfactory still comes the announcement which the veterinary surgeon feels it his duty in such cases to make to the proprietor of the lame horse, that the lameness is of a nature requiring the horse to be laid up out of work for some length of time, and that treatment, even under every advantage of repose, is not always—and particularly when the lameness has been of considerable duration, or proves to have been a relapse—so efficacious in restoring soundness as he himself, as well as his employer, have reason to desire.

Farriers and grooms, and persons conversant in the ailments of horses, have always attached ill omens to cases of lameness in which nothing was to be discovered to account for lameness: they have ever "fought shy" of such cases, and been evidently mysterious and guarded in their opinions concerning them, experience

having taught them that seldom any "good" resulted from having to do with them. Many a fine-looking horse, going lame from no visible cause whatever, has been bought at the hammer, a "bargain," as it was at the time thought, who has turned out after long and skilful treatment still a lame horse, and in the end proved any thing but "a bargain" to his purchaser.

The medical aphorism, that what has been a long time in *coming* will take a long time to *go away*, will be found of especial application in navicularthrititis; and what renders the navicularthritic case still worse in prospect is, its known tendency to relapse. It is vexatious enough to have a valuable horse, in the bloom of health and condition, fall lame in one of his feet without any blame being imputable either to his groom or his rider, and with nothing to be seen or felt by either of them to account for his lameness; but the vexation becomes doubled when the owner comes to be informed that the animal's lameness is of a nature which will not only require his being let out of condition, but that will necessarily occupy some considerable time in being treated after a manner which affords the best promise of the horse standing sound in his work afterwards. It is any thing but an agreeable duty on the part of the veterinarian to feel himself forced to make such disclosures as these; and I may add, unless he be prudent enough to make such preliminaries understood, the treatment of the case may, in the end, prove any thing but creditable to him or satisfactory to his employer.

THE TREATMENT OF NAVICULARTHRITIS may be either of a mild or soothing description, or such as affords relief rather by the absence of annoyance and irritation than by any especial curative influence in the means employed; or it may consist in the adoption of such remedial means as are proved to possess positive power over the disease present. In a case of navicularthrititis which is quite recent, the preferable plan of procedure is this negative form of treatment; such being advantageous both on account of the less alarming aspect it presents to the owner of the lame animal, and because very frequently—supposing the horse to be put under it immediately after the lameness shews itself—soundness will result from it. I am quite aware it may be said that this is dallying with the case—losing time by treatment—which, supposing it does succeed, may fail to *permanently* remove the lameness. I am not of opinion, however, that the short time occupied by such palliation materially affects the subsequent and more appropriate treatment of the case; and as it very frequently happens that it is desirable to have the horse restored to soundness in a short interval of time, and without blemish to his foot or leg, even though such restoration cannot for certainty be depended on to last, I think the simple plan of treatment I am about to describe, in cases that are *truly*

recent, will be found advisable: at the same time I wish it to be distinctly understood, that, in a case in which the proprietor of the lame horse is willing to afford the requisite time, and the horse, after being restored to soundness, is to be expected to return to severe work, there can be no question about the general inadequacy of this mild treatment to answer such an end.

The simple plan of treatment I adopt in a case of navicularthritic lameness which has but just commenced, is to have the shoe taken off the lame foot, to have the sole of the foot pared out, and the crust rasped round, and afterwards to have foot and leg immersed in a warm bath, the immersion being succeeded by the envelopment of the lame foot in an ample hot poultice of bran and linseed meal. The poultice will require renewal every night, as well as every morning after the warm bath. And while this emollient treatment is soothing and relieving the foot, I commonly exhibit a brisk purgative. The purge will occupy the animal three days, and the day he is admitted or seen for the first time reckoning for the fourth, three days more will complete the week, at the expiration of which time he may have his shoe *tacked* on, and be seen out. By such simple treatment, and a week's repose, many such cases have I seen restored to soundness; but there must be taken into this account the important circumstance of these cases coming to me *on the very day*, I might almost say on the very hour, of their commencement. Such prompt application cannot be looked for in private practice, and therefore it is that the nature of the case becomes materially altered. Still, in many instances when late application has been made, supposing the case to be a first attack, and it be highly desirable, as I said before, to have the horse made sound without blemish, the emollient plan may be tried: it may very likely fail, but it will hardly put the animal's lame foot in a worse condition for more surely effective treatment than it was formerly in, and, after all, but a week or so will be lost.

THE PERMANENTLY RESTORATIVE TREATMENT consists in *topical blood-letting* and *blistering*.

BLOOD-LETTING is practicable, so as to have a *topical* or local effect, either from the foot itself or from some bloodvessel directly supplying blood to it, or returning blood from it. The pastern arteries and veins have been opened with this view; puncture of the former, however, has been found to be attended with inconvenience and even danger, while the latter have yielded too spare and uncertain a stream of blood for the evacuation to be such as was likely to be followed by any or much beneficial result. The part from which blood is usually drawn, and with more convenience and effect, perhaps, than from any other, is the *toe of the foot*, or, rather, the anterior border of the horny sole, whereabouts is to be found

the *circumflex artery* of the foot. Not that this vessel supplies the navicular joint, its arteries coming principally from the *artery of the frog*: there, however, exists so free an intercommunication between the bloodvessels of the foot in general, that abstraction to any amount from one may be said to exert more or less influence on all.

Preparatory to the operation of opening the artery, the horny sole of the lame foot should be pared with a sharp drawing-knife until every part of it be made thin enough to *give* with facility under the pressure of the thumb; which being done, with a small drawing knife (a searcher) a groove should be made crosswise a little behind the junction of the front border of the horny sole with the toe of the crust of the hoof, deep enough to penetrate to the quick, through which, with a common bleeding lancet, the circumflex artery is readily stabbed; and the stab is to be made *obliquely*, such wound yielding blood more freely and plentifully, generally speaking, than either a transverse or a linear puncture. The stab should not be made before free passage has been opened through the horn with the drawing-knife for the lancet, and sharp and forcible should be the movement of the hand in making the stab. Upon this movement, and upon the direction of the point of the lancet, as well as upon hitting the precise spot for puncture, depends the success of bleeding from the toe of the foot.

Mr. Turner is an advocate for *commencing* the treatment with blood-letting; and he would have blood abstracted *locally* "until the system is affected *generally*—six quarts of blood to be drawn at one operation." Excellent, however, as my friend's practice in general is acknowledged to be, I cannot help thinking that in the present instance he has stepped a little beyond the bounds of the requirements of the case, or even of prudence. It must be borne in mind that the inflammation we have to treat rarely, if ever, manifests an *acute* character, and that in some cases ulceration rather than inflammatory action is prevailing; a state of joint in which blood-letting cannot be expected to afford that relief which as a remedy for inflammation is naturally looked for from it. For these reasons I commonly limit my blood-letting to the abstraction of six or eight *pints*, repeating this in cases which exhibit any unusual amount of inflammatory action; and while the wounds resulting from these bleedings are healing, I administer a brisk cathartic. An excellent rule for general practice is to immediately succeed the first blood-letting, as soon as the wound in the sole is sufficiently healed, by what is familiarly known as "a sweating blister."

Now, to make myself in this matter understood—in a case brought for treatment, as soon as lameness is discovered, and which has been preceded by no previous lameness in the same foot from the same cause—in other words, by no *relapse*—as I have before

observed, from simply leaving off the shoe, and putting the foot into a warm bath, and afterwards a hot poultice, will the lameness very commonly subside. The stability of such a cure, however, not being reliable upon, this simple treatment may either be from the first rejected on the score of its inefficiency, and such as I am now describing—bleeding and sweating—adopted in its stead; or, this latter treatment may be kept back in reserve for the relapse, which is but with too much reason to be apprehended as the consequence of severe work, even here. For the single blood-letting and sweating blister still fall short of what is practicable for the permanent relief of the case, and still occupy less time, and be attended with less temporary blemish, than the most severe form of treatment.

Supposing a horse lame from navicularthrititis brought for treatment—as such cases usually are in private practice—so long after the first shew of lameness that it is evident warm baths and poultices are put altogether out of the question, the point then will turn on the expediency of submitting the animal to this single blood-letting and sweating blistering in preference to laying him up for so much greater length of time, as an extreme plan of treatment would necessarily demand. It may make a difference of a month or six weeks, and such often becomes a considerable objection. In such a case, after the wound is sufficiently healed to admit of a tip being nailed on—care being taken that any festering that may have been engendered is at an end, and replaced by granulative action—a sweating blister should be applied upon the pastern and coronet; the best application we can use being, in my opinion, the *acetum cantharidum*. To produce this desired effect nothing more is required than to *paint*—if I may make use of the expression—the hair of the pastern and coronet, in the direction it grows in, with a small painter's brush, taking care that the strokes of the brush are repeated frequently enough to *wet* the hair thoroughly with the liquid. The horse is then to be fastened short up so that he cannot lie down; and four and twenty hours after the application of the blister, supposing it to have taken due effect—which by this time it will if it produce any effect at all—the hair which has become ruffled and matted together by the discharge from the blister should be sponged well with warm water, the object being to preserve the skin from any subsequent stimulation from the blister in the acidity of the discharge caused by it, and thus to preserve the hair. Should insufficient effect appear to have been produced, it may be advisable, on the second or third day afterwards, to apply a little more of the *acetum*; though extreme caution will be needed in so doing, having rarely made the experiment myself without, in the end, having had reason to repent, on account of the hair coming off. I would

rather wait a few days before the second application was made. The sponging operation should be carefully performed every morning, smoothing down the hair in so doing: at the same time it is a wise precaution to take, to smear the heel with grease, lest any of the blister or discharge should escape into it. About ten days or a fortnight after the application of the blister, under attentive management, the sweated parts will in general have become sufficiently soft and pliant again to warrant the horse being seen out in a short gentle trot. Should there remain, however, any scurfiness about the pastern or coronet, his action will necessarily be stiff in those parts, and on that account perhaps will he still shew lameness, supposing he does not do so from his continuing unrelieved by the remedies that have been employed. Providing he go sound, or so much better that he is evidently on the road of improvement, let him remain, as before, at rest in his stall for another week, and then be again trotted out for trial; a period when, his progress towards amendment being satisfactory, he may be turned into a loose box, his continuance in which must depend entirely on circumstances. Should his services be peremptorily demanded, of course he must return to work; though the longer he is kept out of work the greater will be the chance for him to stand sound when he comes to be put to it.

In a case wherein such treatment as this—intermediate as it is in intensity and length of time occupied between the mildest and severest forms of treatment—fails to afford the expected relief, or in a case wherein either from consideration of its nature, or from its being a relapse, or other circumstances, it is resolved from the first to place the lame horse under that course of treatment which presents the surest prospects of ultimate success, sufficient length of time being granted by his owner to put it into effective execution, the plan to be adopted—which I believe, at all hands, is reckoned the most effectual—is as follows:—

When there is plain evidence to shew, or even reason to suspect, that inflammation continues unabated in the navicular joint, take blood, not once only, but twice, from the toe of the foot, nay! thrice, if required, which is rarely the case, to the amount, under ordinary circumstances, of six or eight pints each time; and as soon as convenient after the last bleeding, i. e., as soon as the wound made by the lancet is sufficiently healed to bear having a tip nailed upon the hoof*, have the coronet and pastern, and *fetlock as well*, closely trimmed or rather shorn of their hair, and over the

* It may not be requisite or even advisable in a strong-horned foot to put on any shoe: in a brittle or weak-crusted foot a tip prevents fracture of the hoof.

entire surface apply a strong blister; the horse being fastened up in his stall afterwards, so as not to be able to lie down, according to the usual mode of securing blistered horses. After standing for three or four or five days in his stall, according as more or less swelling of the leg ensues, the blistered parts may be well oiled, and the patient may be turned into a loose box; but I would not have this box a large one, because in his present condition quietude is much to be preferred to moving about. Such a blister will cause the cuticle, and with it the hair, to come off, and the horse will certainly not have his leg restored to be in a condition for work under a month or six weeks, the blood-letting and blistering altogether occupying about a couple of months. And unless such time be given up for the treatment of the case, the veterinarian had much better, for his own credit's sake, be without the case. Indeed, in many cases, some two or three weeks more will be found desirable either for complete recovery from the effects of the blister, or for the more perfect subsidence of the lameness.

But supposing, after all this, that the lameness continues, if not to the same degree, still in too palpable a degree to admit of the animal being re-taken to work, what at this stage is to be done?—what more can be put in practice for the relief of the case? Having recourse to blood-letting and blistering again would be injudicious, there being most probably nothing to call for it. Whatever inflammation existed at first has most likely by this time departed altogether from the navicular joint; or, if it has not wholly ceased, has subsided into a lingering chronic action which hardly calls for, or is likely to be very little benefited by, repetition of blood-letting. There may be—indeed, probably there will be—some heat and tumefaction remaining about the pastern and coronet; but this is most likely the effect of the blister, and therefore need not be heeded further than as some guide to us concerning our future treatment of the case.

In this stage of an unrelieved or uncured case I have frequently tried the *frog seton*; though hardly ever, I may add, with any such result as has satisfied me of any decidedly beneficial operation it has had: on the contrary, the horse has often gone as lame after the withdrawal of the seton as he did before: I have therefore discontinued using the frog seton in navicularthrititis. The practice I now adopt in the case before us is rather of an *assuasive* than a counter-irritant character. It consists simply in employment of refrigeration and rest. This, whilst it cools the external parts, and robs them of any heat or inflammatory action they may still retain, abstracts any chronic inflammation that may linger about the parts within, at the same time that it softens and supples the hoof. Having had the tip on the lame foot re-

moved—supposing this has not been done before—and the sole thinned afresh, the toe shortened, and the quarters rasped, I recommend that the horse should stand with his fore feet in clay. The simple plan I adopt is to make a clay bed in the horse's stall, of sufficient breadth to render it impossible for him to place his fore feet in any situation out of it, and deep enough with clay to bury the hoofs of the feet, as they stand, in it. In this bed I have the animal kept standing, taking care that his head is tied short up, all day long; while, at night, he is placed in a littered stall to lie down, or else is turned into some confined yard or box. This is preferable to standing with the hoofs immersed in water, because from the conducting property of the clay, and the continual evaporation going on from the various irregularities of the trampled clay bed, the feet experience so much more refrigeration. In this simple treatment I persevere until such time as heat has entirely left the external parts, and swelling likewise; at least, the latter to that extent that it is from appearances likely to diminish: and thus have I known numberless cases of the kind described at the head of this paragraph either restored to soundness, or to that approximation to it that they have been considered sufficiently recovered to perform whatever has been required of them.

About *firing the coronet* or pastern, I have nothing more to say than that it is an old practice, one that was had recourse to at a time when navicularthrititis was noted as "*foot lameness*," without any thing being known of its seat or nature; at the same time one which, from its counter-irritant operation, has no doubt been on many occasions followed by benefit; not more benefit, however, than would have resulted from a blister, nor so much as generally is found consequent on blistering after blood-letting. Added to which, the scorings of the cautery, if made *deep*, tend to disorganize and destroy the secretory structure of the coronary body, and this entails a defective or irregular formation of horn.

THE OPERATION OF NEUROTOMY, the dernier resort of the veterinary surgeon, being especially applicable to the unrelieved and incurable case of navicularthrititis, shall be made the subject of a future paper.

THE HEPATIC AFFERENT VESSEL.

By Mr. JOHN JACKSON.

If the spleen were a heart, i. e. an auricle and ventricle, in the former of which the mesenteric veins terminated, and if the splenic and portal vein and its ramifications in the liver were an artery

like the pulmonary or the aorta, the vessel which takes the blood to and propels it through the capillaries of the liver would be as well understood as the vessel which takes the blood to and propels it through the capillaries of the lungs, or as the vessel which takes the blood to and propels it through the capillaries of the general system. Physiologists understand the pulmonic and systemic afferent vessels, which consist each of a heart and artery, but not the hepatic afferent vessel, which consists of a spleen and vein. They perceive that the pulmonic and systemic afferent vessels produce a constant and rapid motion of the blood through the pulmonic and systemic capillaries; and if the hepatic afferent vessel had consisted, like them, of a heart and artery, they would have perceived that it also produced a constant and rapid motion of the blood through the hepatic capillaries; but, consisting as it does of a spleen and vein, they do not perceive that it produces an *intermittent* and *slow* motion of the blood through those capillaries. Heart and spleen, and artery and vein, are anatomical antitheses, and produce opposite physiological effects:—

Heart + artery = constant and rapid motion of blood.

Spleen + vein = intermittent and slow motion of blood.

If the right auricle and ventricle were a spleen, and the pulmonary artery and its branches a vein in the middle of which the anterior and posterior venæ cavæ terminated, there would be an intermittent and slow motion of the blood through the pulmonic capillaries; and if the left auricle and ventricle were a spleen, and the aorta and its ramifications a vein in the middle of which the pulmonary veins terminated, there would be an intermittent and slow motion of the blood through the general and systemic capillaries; and if the spleen were a heart in the auricle of which the mesenteric veins terminated, and the splenic and portal vein and its ramifications an artery, there would be a constant and rapid motion of the blood through the hepatic capillaries.

Oct. 11, 1847.

DISEASE OF THE PLEURITIC AND PERICARDIAC MEMBRANES, WITH ABSCESS OF THE LATTER.

By JOHN JEKYLL, *M.R.C.V.S., Newland-street, Lincoln.*

To the Editor of "The Veterinarian."

Sir,—IN October 1846, I was called in great haste to attend a large fat wagon-horse, the property of a gentleman residing at South Carlton, near Lincoln. I was requested to attend as quickly as possible, and was informed that the animal had been at his usual work (ploughing upon light soil), and had appeared in good health and spirits up to the time he was so suddenly attacked. The attack was so sudden and violent, that it was with great difficulty he reached the stable. When I first saw him he presented the following symptoms:—

The inspirations were about one hundred in the minute. Every muscle which could possibly assist in the breathing process was in the most violent agitation: the head was for a short time held high up, the animal appearing anxious for more air. Then, suddenly, a most distressing and almost suffocating cough came on, which caused the horse to lower his nose to the earth; and when the head was thus pendant, a large quantity of thin white mucus literally flowed from both nostrils; after which the horse was slightly relieved for a few minutes, when the cough would again return. Auscultation of the chest yielded similar sounds to those emitted by the thorax of a horse directly after a long fast gallop, and also the mucous *râle* at the most dependent part of the chest. He stood with his legs wide apart, doubtless to increase the thoracic cavity, and also to gain mechanical support, as he was evidently afraid of falling. The countenance evinced great anguish. The eye was very prominent, and the pupillary opening large—no pulsation at the jaw, and the vessels apparently almost empty. The pulse, as taken at the heart, was so quick, feeble, and irregular, that I could not count it. Pressure did not cause any apparent increase in the size of the jugular veins, this affording additional evidence of the fearful state of the circulation.

Betwixt the intervals of cough, I, with great care, administered ʒij of the spirit æth. nit. and Oss of brandy, diluted with tepid water. Soon after the stimulant was given, the heart's action became more firm and regular, the pulse detectible at the jaw, and the jugular veins again filled. I now abstracted about eight quarts of blood, and gave a full dose of cathartic medicine. I gave

mild febrifuge mixture, morning and evening, for five days; at the end of which he was convalescent, except a cough, which was removed in a fortnight more, by mild alteratives. He was very much reduced in flesh, and was a long time before he recovered his former condition. About six weeks after this attack his hind legs began to swell, and discharged a thin fœtid fluid, which was somewhat difficult of cure: it however yielded to the usual medicines employed in such cases.

The horse had three months' rest: he then appeared well and in fine condition. I now recommended him to be tried at his work. The first day he worked well; the second day was not far advanced before he was attacked with precisely the same symptoms. I subjected him to the same course of treatment, and he again recovered. His legs were never affected with any disease after, but that was probably owing to the occasional exhibition of a mild cathartic. He was allowed a long rest, with good food. It was now the beginning of May 1847, and the horse appearing well and almost fat, he was tried at work again, and with a like result, and by similar treatment recovered. I recommended a summer's run at grass as the only chance of ever rendering him a useful animal. For two months he fed well and got quite fat, and was a match for the majority of the fashionable dray-horses of London. After this time he had frequent attacks of the same symptoms in a very mild form, which would pass off in about one hour. These attacks became more and more frequent, and of longer duration. I advised the owner to allow the horse to take his chance at grass, as I considered medicine could not be of any further use to him. Œdematous swellings now made their appearance in various parts of the body, but always in a dependent position. The pulse was small, and ranged betwixt 50 and 70. He daily grew worse, lost his appetite and flesh very rapidly, and died in a month after he began to be attacked at grass, without exertion for an exciting cause.

I made a careful post-mortem examination, which developed the following morbid changes:—The abdominal viscera presented no trace of inflammation; the alimentary canal contained little else but fluids: the interior of the chest was next exposed for inspection, and the fluid which it contained first claimed my attention; it had a dark muddy appearance, and contained a few small pieces of coagulated lymph, and measured about three gallons. Flocculi of lymph were deposited on various small portions of pleura; the lungs were very small and much compressed, and uniform in texture, but the diminution in size was not owing to diseased action in their structure, but to the compression of the fluids from without. The pericardium was much above its natural dimensions, and

contained about three quarts of a pale clear fluid. The serous membrane covering the inner surface of the pericardium and the external surface of the heart was covered in every part, about five-eighths of an inch thick, with coagulated lymph of firm texture, the surface of which was smooth and of a beautiful rich golden yellow. The part of the sternum to which the pericardium gives attachment was the seat of an abscess, containing about a pint of white matter. The covering of the abscess was thick and cartilaginous. The heart was of its natural size, but pale and soft; its inner surface was healthy. The brain, with the remaining textures of the body, presented no form of disease.

Sir, most respectfully your's, &c.

6th October, 1847.

CASE OF HYDROPS UTERI IN A COW, OPERATED ON.

By Mr. CARTWRIGHT, M.R.C.V.S., Whitchurch, Salop.

ON the 21st September, 1846, I was sent for to see a cow five or six years old (insured in the Agriculturist Cattle Insurance Company), belonging to John Vernon, Esq., of Tushingham, which was supposed to be dropsical, as she had been getting much larger in the body recently than naturally she ought to do. Is in calf, having been bulled on the 4th May last; consequently her time would not be expired for calving until the latter end of February.

On looking at her abdomen, it is clearly seen that it is considerably larger than it ought to be, especially so on the right side, on pressing which great regurgitation takes place. The calf can scarcely be felt. In consequence of the owner thinking there is but little the matter with her (but the cow-man is of a contrary opinion), she is to be left alone for the present, although I believe she is dropsical. I was informed that she had been fighting a few days ago, which may have brought on or increased the disease.

23d.—Still increasing in size. Ordered diuretics to be administered daily.

Oct. 3d.—I was again sent for, as she had increased much in size, and they were afraid of turning her out and meeting with an accident.

Symptoms.—Abdomen very large, especially at the sides and lower part; looks tolerably well; her appetite is good and she chews the cud. I passed my hand up the vagina. The os uteri is

perfectly closed and healthy. The opening in the os uteri pointed downwards, and there would be some difficulty in passing a catheter into the uterus. I next examined her *per rectum*, and could feel the uterus under my hand very distinctly, and much enlarged. I cannot feel the fœtus. I can pass it over the uterus to a great extent, and my hand can be felt pressing on it on the outside of the right side. I am now fully convinced that the water lies in the uterus, and not in the abdomen, and am determined to introduce the trochar into the uterus through the right side.

Operation.—Having obtained plenty of assistance, I got one man to hold her by the nose, and another her hind legs with a hough-band; and after drawing the skin backwards a little where I intended to puncture, I plunged a trochar, four and a-half inches long, into the uterus, midway between the ribs and the stifle, or, if any thing, a little lower.

On withdrawing the trochar, the water issued out in a full stream, as clear as crystal, and in this way, without the least intermission, we drew off twenty-five gallons; but, in consequence of the cow hoosing, the uterus was forced from off the canula, leaving it within the abdomen, between the peritoneum and the bowels, thus clearly proving that the water was contained in the uterus. I then withdrew the canula. She now appeared rather faintish, and tottered about, and I thought she would have fallen down, but shortly after she rallied a little. In consequence of the removal of such a large quantity of water, I passed a body-roller around the abdomen to give it support, gave her a little ale and whey, ordered her mashes and moderate diet, and to be kept quiet.

4th.—Going on well. No symptom of casting the fœtus, and she seems perfectly easy. Left four cordial diuretic drinks.

8th.—Still going on well. No straining has yet taken place. Feeds well, and looks more active and lively. Turned her out a little to-day.

10th.—This day some cleansing came away, but no more water was seen voided, nor has there been any straining.

15th.—I saw her this day. She looked hollower than usual, and I fancy she must have voided more water from the uterus unknown to them. Feeds well, and is kind in the skin. Gives three or four quarts of milk at a time. I introduced my hand up the vagina to ascertain whether I could extract the fœtus, but found the os uteri nearly closed, as I could only get my fore-finger into it, which I fancied was rather harder than when I last felt it. I then introduced my arm up the rectum, and I could feel the fœtus at a good distance from me, but not very distinctly, as it was too far off. I ordered her to have good keep, and not to be exposed to the wet. There is very little discharge from the vagina.

Nov. 3d.—Going on well, and is turned out with the other cows. No discharge of any importance from the vagina, nor has the foetus been discharged, as they know of. Yesterday she was in *æstrum*, but the bull was not admitted to her. Soon after this she was sold to feed, and, I believe, kept in perfect health.

In your number for January last is a paper from me on this subject, which I intended to have followed up more fully, but hurry of business has prevented me. For the following very interesting and rare case, I am indebted to Mr. W. Haycock, veterinary surgeon, Huddersfield:—

HYDROPS UTERI IN A SOW.

“ July 14th, 1842.—I was requested this day, by an individual who resides in this town, to examine a sow which he said was not well. She did not feed amiss, but she was not lively, and he noticed also that the animal grew very large in the body. She had pigged six weeks previously, and had not been again to the boar. I went and examined the beast, but I must confess that I could make little or nothing of it, and I told the owner to that effect. Nothing, however, was done in the way of medicine; nor did I hear of the case again until the 23d of the same month, when the owner came to request that I would examine the animal, for she had suddenly died in the street, as they were bringing her from the boar. On laying open the abdomen I perceived the uterus to be very much distended, and, on removing and cutting into it, I found that it was filled with clear water, which I measured, and found to be three gallons in quantity.

“ The lining membrane of the uterus presented no traces of recent inflammation: it was perfectly white, smooth, and glistening. The remaining viscera of the abdomen were healthy. The lungs were congested with blood, which, in my opinion, was the immediate cause of death, as the animal had been run a good deal in the streets, and, from the uterus being so much distended with fluid, the diaphragm was prevented moving with the requisite freedom; hence congestion of the lungs and the death of the animal. The brain and spinal marrow I did not examine. Such is the case which came under my notice, and the only one of the kind I ever saw. If it be of any service to you, you are heartily welcome to it, and you are at liberty to make what use of it you choose.”

ON THE EPIZOOTIC AMONG SHEEP.

By H. ERNES, *M.R.C.V.S., Dockhead, Bermondsey.*

To the Editor of "The Veterinarian."

Dear Sir,—THE disease recently observed in Smithfield market on some sheep imported from Spain, and of which I have no doubt you have already heard, is well known on the Continent: it prevails at times epizootically, and has become enzootic in many parts. It is by the French known as the *CLAVELEE* (from *clavus*). It is an eruptive disease peculiar to the species *ovina*, and bears a strong analogy to the variola. Its attack is confined to once, no case being on record where the same individual has been affected twice. It is highly contagious, and is often communicated by the clothes of those who come in contact with the diseased flocks. The pustules are situated on the inside of the thighs and legs, behind the shoulders, mouth, and eyes, and generally where the skin is thinly covered with wool. Its march, duration, termination, complication, &c. are similar to those of the variola, which analogy had induced a hope that vaccination might be a preventive: this expectation has not been realized, but inoculation of the virus taken from the pustules of the diseased has been attended with better success, and is now generally resorted to on the Continent.

THE PETITION FOR A NEW CHARTER.

*To the Right Honourable Sir George Grey, Bart., Her Majesty's
Principal Secretary of State for the Home Department.*

Sir George,

I HAD the honour in July last of acknowledging the receipt of a communication from Mr. S. M. Phillips, intimating that a petition from the Governors of the Royal Veterinary College and the Highland Agricultural Society was then under your consideration. May I be permitted to beg the favour, in the name of the Council of the Royal College of Veterinary Surgeons, of a copy of that document, if not incompatible with the usual routine on such occasions?

I have the honour to be,

Sir George,

Your most obedient servant,

THOMAS TURNER,

President of the Royal College of
Veterinary Surgeons.

311, Regent-street,
September 10th, 1847.

Whitehall, 15th September, 1847.

Sir,

I am directed by Secretary Sir George Grey to acknowledge the receipt of your letter of the 10th instant, and to transmit to you the enclosed copy of the petition of the Royal Veterinary College of London and the Highland and Agricultural Society of Scotland, in pursuance of your request.

I am, Sir,

Your obedient servant,

DENIS LE MARCHANT.

Thos. Turner, Esq.,
President of Royal College of Veterinary Surgeons,
311, Regent-street.

To the Right Honourable Sir George Grey, Bart., &c., &c., &c.

The Humble Petition of the President and Noblemen and Gentlemen, Governors of "the Royal Veterinary College of London," and the President and Directors of the "Highland and Agricultural Society of Scotland,"

Sheweth,

That a Charter was granted by Her Majesty on the 7th day of March, in the eighth year of her reign, on the Petition of Thomas Turner, William Joseph Goodwin, Thomas Mayer the elder, William Dick, William Sewell, Charles Spooner, and James Beart Simonds, to them and to such others as then held certificates of qualification to practise as veterinary surgeons, granted by the Royal Veterinary College of London or by the Veterinary College of Edinburgh, and to such other persons as should thereafter become students at either of such colleges, or at any other college to be sanctioned by her Majesty for that purpose, and should pass such examination as might be required by the orders, rules, and bye-laws to be made under the said Charter, that they should be members of and form one body politic and corporate by the name of the Royal College of Veterinary Surgeons.

That some of the reasons urged by the Petitioners for the granting of the said Charter, and which are fully set out in the said Charter as being those on which it was granted, were, that the said Veterinary Colleges of London and Edinburgh had been established for many years for the education of students in the veterinary art.

That the Royal Veterinary College of London was so established in the year 1791, and had been patronised by her Majesty's royal

predecessors, and then enjoyed her royal patronage; and that it was instituted to improve the veterinary art, which had theretofore been practised by ignorant and incompetent persons.

That Parliament being convinced of the utility of the Royal Veterinary College of London, and of its great national benefits, had munificently, when required, granted aid to it.

That it had also been of great advantage to her royal army.

That for the instruction of the pupils, professors were appointed and a school of veterinary art formed, by means of which enlightened practitioners of liberal education were dispersed throughout the kingdom.

Your petitioners, the Governors of the Royal Veterinary College of London, further state, that when the members of the veterinary profession were desirous to obtain the said Charter so granted, a Committee was formed by them for the purpose, and such Committee came to the following resolution, which was duly entered in their minute book, under the date March 10th, 1841:—"That it is the opinion of the Committee that no clause or clauses shall be inserted in the proposed Charter which shall interfere in any way with the private arrangements of the Governors of the Royal Veterinary College of London or the Veterinary College of Edinburgh."

That it was without the personal knowledge of the Governors of the Royal Veterinary College of London, but upon the understanding that this resolution would be faithfully acted upon, that the petition for the Charter was signed by the Professors of the Royal Veterinary College of London; but nevertheless, although the Professors were appointed members of the said Committee, alterations were, as they allege, subsequently made in the proposed heads of the Charter, which the said Professors did never see, nor did they sanction or approve of the same; and no notice was given them of any Committee meeting to consider the same, and they were ignorant of several of the provisions of the Charter until after the same had been granted.

That the Royal Veterinary College of London is in no way represented in the said body politic and corporate, but, on the contrary, power is given to the Council, who are elected by the veterinary profession under the said Charter, to have the entire management and superintendence over the affairs, concerns, and property of the body politic and corporate, and to make any orders, rules, or bye-laws (amongst other things), as to the manner of examining students who shall have been educated at the Royal Veterinary College of London or the Veterinary College of Edinburgh, or any other recognised college, and for regulating the nature and extent of such examinations, and for the admission or

rejection of such students as members of the said body politic and corporate, and fixing and determining the amount to be paid on examination and admission, or otherwise, and generally touching all other matters relating to the said body, and to alter the same, and make new orders, rules, and bye-laws, as the Council shall think proper.

That, by another provision of the Charter, the Professors of Colleges are excluded from acting as examiners of the students at such Colleges.

That the powers given to make such orders, rules, and bye-laws are so wide as to take the management of the Royal Veterinary College of London, as a school, entirely out of the hands of the Governors of that Institution, in whom the management has been vested since its establishment in 1791, and under whose direction the advantages to the veterinary profession and to the public, as set forth in the Petition and the Preamble of the Charter, have arisen.

That the said Royal Veterinary College of London is the private property of the Subscribers thereto, the Governors being the appointed directors thereof, and who may continue or close the same at their discretion; and it is only from their desire to advance the veterinary art that they have allowed their Institution to be employed as a college of instruction, and that thereby the veterinary profession in this country owes even its existence to their establishment.

Your petitioners, the President and Governors of the Royal Veterinary College of London, therefore, complain of the powers granted by the said Charter to the veterinary profession over their Institution, and of their not being in any way represented in the said chartered body.

Your petitioners allege that the members of the veterinary profession have no means of educating students, as required by their Charter, excepting at the Royal Veterinary College of London and the Veterinary College of Edinburgh.

That the profession is yet young, and, being so, dependent on the Colleges of London and Edinburgh; and being also intimately connected with the science of agriculture, the societies for the promotion of which have also rendered their aid to such colleges and to the veterinary profession, will be greatly benefitted by a closer alliance with the said Highland and Agricultural Society, and that thereby additional dignity will be reflected on the whole profession.

That with a view to induce the Council appointed under the said Charter to meet the views of your petitioners, and which views were acquiesced in and supported by her Majesty's then Secretary of State for the Home Department, the right honourable

Sir James Graham, baronet, your petitioners entered into negotiations with the said Council, and proposed to them several alterations in the Charter; those to which your petitioners attach the greatest importance being, that in order to insure the proper government of the existing Colleges for the education of students, and enhance the respectability, and thereby increase the usefulness of the veterinary profession as a body, there should be formed a veterinary board, consisting of her Majesty's Principal Secretary of State for the Home Department, or some person appointed by him, and a certain number of the heads of such Colleges, and of the said Highland and Agricultural Society, and of certain other public officers of the veterinary profession, to whom the acts of the Council and the appointment of the Examiners, and all bye-laws, should be submitted for approval. That the Professors of the Royal Veterinary College of London, appointed by the Governors of that Institution, and the Professors of the Veterinary College of Edinburgh, appointed by the Highland and Agricultural Society of Scotland, should be *ex officio* members of the Council.

That members of the veterinary profession resident above twenty miles from London should be at liberty to vote for members of Council by proxy.

That such Professors, together with other public officers connected with the veterinary profession, should be *ex officio* members of the Examining Board. That the maximum fee of ten guineas allowed to be taken by the Charter, and actually imposed by the Council for the admission of students, should be reduced to a maximum fee of five guineas, for examination and admission inclusive. That the Veterinary Board should be empowered as veterinary science progresses, and with the consent of the Council, to alter or extend the curriculum of study and the nature of the examinations.

That a minimum course of study should, for the purpose of insuring the efficient education of pupils, be inserted and required by the Charter; and that the bye-law as to the apprenticeship of students prior to entering the said Colleges should be notified to meet existing circumstances.

That such negotiations were aided by his Royal Highness the Duke of Cambridge, the President of the Royal Veterinary College of London, who, as such President, called a meeting of the Governors to meet a deputation from the Council of the said corporate body; and it was hoped that the above views, as approved of and suggested by his Royal Highness at such meeting for the consideration of the Council of the corporate body, would have been acceded to.

That, however, the Council has since refused to submit to an

alteration in the Charter so obtained by them, and are inflexibly resolved upon maintaining it in its present state.

Your petitioners, therefore, have no alternative but to pray that a new Charter may be granted to the veterinary profession, in which the Institutions over which they have the honour to preside may be represented; and they have prepared the heads of a Charter which they humbly submit will effect that object, and be of material benefit to the veterinary profession and to the public.

Your petitioners therefore pray that you will be pleased to take such proposed heads of a new Charter into your consideration, and advise her Majesty to grant such new Charter in that or such other form as may seem expedient.

For the Royal Veterinary College,

WM. SEWELL, Professor,
Secretary.

For the Highland and Agricultural Society of Scotland,

JOHN HALL MAXWELL,
Secretary.

REMARKS ON THE VARIOLA OVINA, OR SHEEP POX.

By ARTHUR CHERRY, V.S.

To the Editor of "The Veterinarian."

"*Tony Lumpkin.*— * * * But when I come to open it, its all — buzz."
She Stoops to Conquer.

Sir,—A STATEMENT has been put forth in "*The Veterinary Record*," on what may be deemed good authority, that a "direful malady, which is new to this country," has recently manifested itself. A very learned account has been given of its characters, and an attempt at the history and origin has been made. Now, had merely the characters and the origin as far as it was known been stated, I should not have felt it necessary to notice the statement otherwise than in corroboration of the morbid appearances; but when an attempt is made to dress up an old and tolerably well-known malady as a new visitation of disease, then, I must own, I am too strongly tempted to oppose such erroneous doctrines, upon the ground of simple justice to those parties, whether practitioners or owners, whose interests are bound up in the welfare of our flocks

and herds; and I say herds, because I saw only yesterday an instance in which a cow had had a very similar affection, and was just recovering without any treatment having been adopted, the attack being but a slight one; still the character of the disease was sufficiently manifest.

With the description of the malady I have no fault to find, but with the deductions therefrom I must differ *in toto*. The axiom of the divinely inspired writers, that what was, what is, and ever shall be, holds in this as in every other instance; for the disease which has been described as "NEW" is nothing more nor less than the *old* "sheep-pox," or *variola ovina*, a disease very often assuming an epizootical character, and, like all the *exanthemata*, contagious in a very considerable degree.

Let us look at the data whence the deductions that the disease is "new to this country" are drawn, and we find that certain sheep, which are described as *Spanish* sheep or "merinos," are brought from "Tonningen, on the coast of Denmark," and others from "Hamburgh;" that they are sold in Smithfield market in different lots, some of which lots are affected and others are not; that shortly after purchase, some of the Spanish sheep are found to be affected with an exanthematous disease; and in about a fortnight after its appearance shewed itself also among some Down sheep with which the Spanish sheep had been commingled; that many died, some recovered, and some were not affected. Now, out of these imperfect data, the conclusion is jumped at, that a disease "*new*" to this country has shewn itself. "Oh! wonderful, wonderful, and most wonderful wonderful; and yet again wonderful, and after that out of all whooping!"

Is any thing known of the previous state or condition of these animals?—how had they been fed, lodged, or tended? Was any great change existing between their then management or food, or comfort, or general position, and that to which they had been accustomed? None of these essential points for investigation appear to have been thought of—nor, of the effects likely to have been produced by their having been confined on board of ship in their transit to this country, is any notice taken beyond that there was "a large cargo." This circumstance might reasonably be expected to have drawn some attention; but no!—this is too trivial a point to require investigation, yet this alone is sufficient to account for the breaking out of the malady. The change from a northern climate to a more southern one, to say nothing of the extreme from such a climate, even though it be summer, to the heat of a ship, the animals crowded together giving off effluvia in increased quantity; the disturbance of the equilibrium of health from the unusual position in which they were all at once placed, and a variety of other

causes, are alike unheeded. It is taken for granted, because these animals did not manifest such a great degree of derangement of health that the most unsuspicious, the most ignorant, could see disease as they ran, that they were *perfectly* healthy! Was there, however, no indication existing, even at this time, that the functions of health were disturbed—no trace visible to a critical eye of something being wrong? Assuredly there was, had it been sought for. It was not the business of the salesman; it was for him to sell, and he sold them: neither is it the province of the farmer or grazier to know the onset of general disease. So long as an animal appears to be in health in the ordinary acceptation of the word, it is as much as can be expected from him: he buys what appears in his judgment likely to answer his purpose; and what may manifest itself afterwards, being beyond his ken, he cannot be blamed for not guarding against, though unfortunately he is the sufferer. But when the buyer seeks for assistance in his need from those who profess to be able to assist or relieve the dire effects resulting from the maladies to which all flesh is heir, something like a fair and impartial inquiry is looked for, nay, imperatively demanded; for how otherwise can any threatened calamity be removed, mitigated, or arrested, unless the causes which produce such malady be known? It is in vain to attempt to cure an *effect* unless the *cause* which produced it be removed, or, at all events, lessened in its intensity.

Now as to the “Downs” which were “depastured” (query, *pastured*; *land* is depastured, but *animals* are pastured) with the foreign animals, were these Downs in *bonâ fide* sound health? or were they in that state or condition in which health is apparently not disturbed, but in reality so predisponent, that any external exciting cause was only wanting to bring on actual disease? Here again we are left in the dark: it is taken for granted that the Downs were in perfect health, and that the merinos or Spanish (?) sheep were the sole introducers of this new (?) malady.

The experiments which have been instituted prove but a well-established fact, that the matter of a pustular disease will produce a similar disease in another individual, when such matter is inserted into the system by inoculation; and, further, that an eruptive fever is capable of being communicated by contact. In this there is nothing new; it is a fact that must have been known from time immemorial.

I shall not anticipate the conclusion of the promised completion of the observations: I did and do still hope to see a little like an extended inquiry instituted upon a broad basis, before any thing is positively stated to be “new,” needlessly to alarm those who have already suffered but too severely by false views and erro-

neous practices. As to my own opinions, I shall only say, that I have been for some months past silently watching for the manifestation of an exanthematous disease: there have been precursory symptoms sufficiently strong for those who looked to find. I have already publicly pointed in the general way to what my views are regarding prevalent diseases, and shall endeavour, as far as lies in my power, to point out the causes, and the deductions to be drawn therefrom, as speedily as so wide a field and so important a subject will permit. Whether I am right or wrong, time can alone shew; but that much may and can be done is positive, but this desirable consummation is not to be arrived at by blinking a question or jumping at conclusions.

I do regret to see such statements as those upon which I have here animadverted put forth by any one, and the more so by those towards whom, would they have permitted me, I felt and do still feel and wish, nothing but goodwill. The world is wide: there is "ample scope, and verge enough," for each and all, to render it needless to tread on the "kibes" of one another.

I am, Mr. Editor,

Your obedient servant.

October 11, 1847.

ON THE VARIOLA, OR SMALL-POX OF SHEEP.

By THOS. MAYER, *Sen., M.R.C.V.S., Newcastle-under-Line.*

AT a time when the flocks of the United Kingdom are threatened with the ravages of a disease not much less fatal than the pleuro-pneumonia amongst cattle, it needs no apology from me in troubling you with this paper, if it will only tend to fling the least degree of light upon the subject. The chief materials of it are derived from the Veterinary Medical and Surgical Dictionary of M. Hurtrel d'Arboval, a work which every English veterinary surgeon ought to have in his library.

Our insular position has, till within this few years, secured our flocks and herds from those formidable diseases which continental Europe has been familiar to for several centuries, viz. the vesicula epizootic of 1840, the pleuro-pneumonia, and now the small-pox of sheep.

A new era of inter-communication has now dawned upon us, and the gigantic power of steam has concentrated the whole of

Europe into one great city; and I hope I may add, into one great family and brotherhood; in fact, it has destroyed both time and space: we therefore cannot wonder, whilst its mighty influence rolls immeasurable wealth and knowledge into the country, that it should also drag along at its chariot-wheels dire disease and death.

This disease was first observed in France in the sixteenth century, since which period it has ravaged the country more or less as an epidemic every ten or fifteen years, sweeping off from one-third to one-half and three-fourths of entire flocks. But it is found existing more or less demically in some of the departments of France all the year round; more particularly in the environs of Paris, to which point it concentrates itself through the medium of the flocks sent to the metropolitan market; consequently, the environs are seldom free from it.

In England it has not been publicly recognised till this year; and I think, if it had had a previous existence, it must ere this, by the ravages it makes wherever it occurs, have forced itself prominently to the notice of the agriculturists and veterinary surgeons of the kingdom.

On this occasion the present affection was imported from Denmark and Hamburgh, and I fear, like the pleuro-pneumonia, will become indigenous to the country.

The small-pox manifests itself by a cutaneous inflammation peculiar to the sheep, followed by a partial or general eruption of pocks, which inflame, secrete a peculiar kind of fluid, and dry up and fall off. These pocks are peculiar in being vesicular and prominent, occurring more particularly upon the exposed parts of the body which are free from wool; and it is not impossible in *aggravated cases*, from the continuous sympathetic affection existing betwixt the skin and membranes of the stomachs, intestines, and bronchial tubes, for it to permeate those tissues, modified in its physical characters by the peculiarities belonging to mucous tissues.

In cases where the eruption is more developed, the pocks extend over the whole of the body. Sheep can only have the disease once. It is highly contagious and infectious, making its attacks at all seasons upon the strong and the weak, but more particularly upon the younger portion of the flock; and it is not unusual for nearly the whole to be swept away. *Fortunately, it is not communicable to man.*

Although this disease is generally propagated by contagion or infection, yet there are times and seasons when it appears developed in an epidemic form spontaneously, appearing dependent upon those extraordinary and inexplicable atmospheric influences inappreciable to our limited intellects and means, save by the effects witnessed.

When once established in a district, it propagates itself from point to point with wonderful rapidity, inasmuch as animals under peculiar atmospheric influences are already predisposed to its reception.

If a flock of diseased sheep have been folded upon a particular locality, or driven in a certain direction, and a healthy flock follows in the same line of district, the latter will immediately take it. The fever runs its course in from ten to fifteen days, according to circumstances; but it is often from three to four or five weeks before the animals clear thoroughly out of its effects; and it is difficult to decide accurately at what precise period an infected animal would be incapable of propagating the disease, as it lurks so long amongst the wool. So infectious is it, that the shepherd, even his dog, the butchers and attendants, are capable of carrying the virus from flock to flock: even the transmission of the fleeces, the excrement, and whatever has been employed about them, will propagate the disease.

One peculiarity belonging to the disease is, that it perhaps attacks capriciously only a third portion of a flock; it then attacks another third, according to their susceptibility of the action of the poison; the first section having it most severely, and by the period the last section has become infected (which may be from three to six months), the virulence of the morbid poison has become much milder.

It may, like the small-pox in the human subject, be regular or irregular, mild or malignant. When the animal becomes infected, the disease is recognized by a dull anxious countenance, feebleness of gait, the head hanging down, the ears lowering, loss of appetite, rumination partially or wholly suspended, heat of skin, and frequent pulse, with acceleration of breathing. This state continues three or four days, when an eruption develops itself on the more naked parts of the body, manifesting itself by small pustules of a red or violaceous colour, soon assuming the form of well-developed pocks, white at the summit, insulated, or confluent (*id est*, running into one another), according to the mildness or malignity of the disease. The pocks have a well-defined border, being flattened in the centre, and of the size of a lentil. In favourable cases, as soon as the pustular eruption has matured, the heat of the skin and the general febrile symptoms gradually subside, leaving no morbid effects behind.

However, in more severe forms, the surface of the body is exquisitely sensitive and burning, the eyes become highly inflamed, the mouth is dry, great thirst, breathing accelerated and laborious, with rapid pulse. As the urgent symptoms increase, the breath becomes fetid, rumination ceases, the head swells, there is a discharge of

saliva from the mouth, running at the nose, the pituitary membrane inflamed and engorged, swelling of the eyelids, conjunctiva ulcerated, accompanied sometimes with disorganisation of the structures of the eyes, oppressed, laboured respiration, with a whistling sound, extreme debility, diarrhœa, the evacuations being very fetid, the eruption retires without coming to maturation, and death soon supervenes.

Young lambs go through the disease very mildly, so much so, that the accompanying fever, so characteristic of the disease, is scarcely appreciable.

As the pustular eruption progresses to maturity, a yellow, transparent, viscous secretion occurs, the summit of the pock is white: at this period the matter possesses its greatest propagating powers. After this the secretion becomes more thickened, assumes the genuine characters of pus, after which it desiccates about the twelfth day, and desquamates. The animal now rapidly recovers its spirits and general health. The period of desquamation is the longest of the four stages into which the disease resolves itself, lasting three or four weeks. According to the French, the dried scabs will not convey the contagion by inoculation.

It is almost needless to point out the urgent necessity there is, as soon as the disease manifests itself, to separate the diseased portion from the healthy. In no set of diseases more than in the exanthematous or eruptive is there greater need to bear in mind, where, as in this class, Nature struggles to fling off the system the morbid matter by which she is oppressed, *that we are or should be only handmaids to her, to assist where needful, and leave her alone where she evidences her powers equal to the occasion.* It is by keeping a steady eye upon this rule and principle that the scientific and successful practitioner becomes distinguished from the ignorant and rash empiric, who is ever thwarting Nature's operations, and consequently scattering death and destruction around him.

Where the disease is running its regular course, the symptoms moderate, all that is required is to keep the animals in a dry comfortable straw-yard, free from cold draft, with plenty of litter, and fresh sweet water to drink; unless the disease occurs in the summer months, when they may be turned out daily into a dry upland pasture, well sheltered, if possible, and not too luxuriant; but whilst the fever is running its course they must not be out during the nights, or when the days are wet and cold, as any check to the eruptive stage would drive the disease upon the internal and vital organs, and thereby render what might have been a simple disease a very complicated and dangerous one. The diet should consist of grass fresh mown, without wet or dew upon it, a few turnips, carrots, or mangold wurtzel; or else, if in winter,

choice hay, bran and crushed oats, or a little linseed cake or oatmeal scattered amongst the bran, and fresh water to drink at pleasure. When the appetite is gone, horn into them oatmeal gruel, or if purging sets in, wheat flour gruel thickened with starch, or arrow root, sago, or rice milk by way of change is beneficial. In mild cases no medicine is required, and, in a fortnight's time, when the fever has run its course, they may be gradually inured to turning out.

When the febrile action runs high and the bowels are constipated, then it will be necessary to give in a little oatmeal gruel a wine glass of cold-drawn linseed oil once or twice a-day, according to the age, size, and constitution of the sheep, so as to render the bowels just soluble, but not to purge, as it would check the eruptive stage (*purging salts are too cold, therefore inadmissible*). After the bowels are regulated, I should recommend five to ten grains of nitrite of potash to be given in a little gruel twice a-day. Should there be acute inflammation of the lungs with much oppression, a small quantity of blood might be taken away to relieve it, say, four or six ounces; but it should be very judiciously and charily had recourse to, as debility soon ensues. As soon as the acute symptoms subside, and the eruption is going on satisfactorily, nothing but good nursing is required.

When symptoms of extreme debility occur, with total loss of appetite, the eruption not coming forward but looking livid, with a disposition of the pustules to run into one another—if the discharge from the nostrils is yellow, fetid, and sticking like glue to them, the pulse rapid and feeble, every symptom evidencing a typhoid form—tonics must be had recourse to, such as gentian, peruvian bark, sulphate of quinine or sulphate of iron in combination with aromatic powders, and administered in some good sound fresh ale; but when diarrhœa ensues, a tablespoonful of port wine, with a little cinnamon, should be given frequently through the day in wheat flour, arrow root, or sago gruel; or, if needful, chalk, confectio aromatica, kino, with a little tincture of opium. It will be necessary to house the worst cases: the places should be airy, but no current; not putting too many together; in summer the straw-yard is the best. As the stench is intolerable, chloride of lime should be placed up and down where they are housed. If any parts of the body are sloughing, they should be kept clean, and dressed with either tincture of myrrh and aloes or Friars' balsam, followed up by a good dressing of warm digestive ointment daily.

According to Hurtrel d'Arboval, the post-mortem appearances occurring in severe cases are congestion of the brain, with serous effusion into the ventricles; the brain is softened, the cerebral portion yellow, blackish; the tongue and buccal membrane disco-

loured; sometimes ulceration of the velum palati, epiglottis and the interior of the larynx; the pituitary membrane thickened, livid, engorged, ulcerated, and sphacelated; sanguineous congestion in the nasal fossa; mucous membrane of the trachea and bronchi inflamed, ulcerated, and gangrenous; sometimes containing albuminous concretions and false membranes; the pleura and sometimes the mediastinum inflamed; effusion of water into the thorax, and even into the pericardium; the lungs diminished in volume, discoloured, tuberculous and hepatised; the heart softened and pallid; the internal surface of the rumen rugged; the reticulum or maniplus distended, and its membrane or internal coat dry; the abomasum or fourth stomach distended with gas; the mucous follicles of its internal coat more or less developed; colon in the same state; the liver tuberculous, adherent to the diaphragm, its substance of a lively red, sometimes of a deep brown colour; the gall-bladder flabby, distended, blue or black; spleen, sometimes voluminous; kidneys pale, discoloured, deprived of their fatty covering, and their surface sometimes studded with little white bodies.

Professor Simonds, of the Royal Veterinary College, London, in an interesting paper published in *The Veterinary Record* of this month, and which I would recommend to the perusal of all flock-masters, has given the following as the post-mortem appearances presenting themselves in one that died soon after its arrival at the College:—"The skin was thickly studded with the eruption in its nodular or tuberculous form. A section of some of these nodules being made, shewed that they extended to the subcutaneous structure, presenting an appearance not very dissimilar to warts. The cellular tissue immediately beneath the integument was infiltrated with blood; the conjunctiva and Schneiderian membrane were highly injected, as was the mucous lining of the trachea and bronchi; and the vessels of the lungs were filled to engorgement, which evidently was the immediate cause of death. The other viscera, both of the thorax and abdomen, shewed no traces whatever of diseased action."

According to the experiments of the French veterinary surgeons, none of our other domesticated animals nor poultry, nor even the monkey-tribe, are susceptible of the action of the small-pox of sheep, neither by inoculation nor infection; but the monkey, from his close approximation to man, will take, both by contagion and infection, the human small-pox. I have seen several cases of what might be called small-pox in the horse, as far as external character went, but still it did not propagate itself to others by infection;—how far it would have done by inoculation, I do not know.

All animals, not excepting birds, have a pustular eruptive disease peculiar to their respective species, which simulates small-pox, but which cannot at all times, or I may say seldom, be propagated from one to the other.

The French have made varied and numerous experiments to ascertain whether, by vaccinating sheep with the matter of cow-pox, it would not protect them from the small-pox; it however failed in doing so: the fever never developed itself properly in them, and the pock was very imperfectly formed; but when inoculated afterwards with the matter of small-pox, they immediately took the disease, and also caught it equally by infection. When the animal was inoculated with small-pox matter first, and after its recovery vaccinated, it was no longer susceptible of the action of the vaccine matter, even locally.

Nor is vaccination in the human subject any protection against small-pox: it appears to possess only the negative merit of superseding and preventing inoculation with small-pox matter, by this means preserving us to a great extent from so fearful a scourge. This is no more than we might expect from the experiments detailed above, and from other facts; *as it is contrary to the laws of nature that matter of a specific kind, having its own specific fever, should supersede matter of another specific kind also having its own specific fever.* My daughter, grown up to womanhood, as well as a friend of her's of equal age, *both having been vaccinated*, caught the small-pox by visiting some poor people where it existed. My daughter had it severely, yet she recovered, but her friend died: my son's nurse and child, and my youngest son, then took it, *although vaccinated*:—the nurse had it also severely. At this period it pervaded the district, many respectable people, as well as the poor, taking it: some died, and others were badly marked. Numbers of these cases had been carefully vaccinated. All these facts tend to the conclusion arrived at:—there is a marked distinction betwixt the characters of the cow-pox and small-pox; the former is simply contagious: small-pox is both contagious and highly infectious, therefore placing the two at rather antagonistical points.

But I consider the evil of vaccination does not terminate simply in a false protective security; it also from its virulent origin,—viz. (according to the philanthropic Jenner himself) from the greasy heel of a horse; or, I should rather suspect, more likely from the fowls of a cow, that local affection being similar in its physical characters to the grease in the horse, which, when the animal lies down, gets introduced into the system by coming in contact from betwixt the claws with the abraded mammæ—produces or lays the

seeds of a scrofulous diathesis and consequent consumption in its thousands; and it is a well-known fact that many children have ever after vaccination been subject to breakings-out of a scrofulous tendency, where nothing of the kind previously existed in their families.

Our neighbours the French have, to diminish the ravages of the small-pox in sheep, adopted the system, to a certain extent, of inoculating their flocks, by which means, some say, it lessens its fatality, and saves time, by getting them through the disease in two or three months, whereas, when it takes its natural course, it occupies six; this to the flock-master is of the greatest importance: however, they are divided in opinion as to its advantages and disadvantages, and in many districts where it has been tried it has again been abandoned. I should, myself, question its policy, as it tends to perpetuate a disease in the country, which by sanitary regulations on the part of government, and the active co-operation of local authorities and agriculturists, might be arrested in its course, and thus die out of the country.

The French have tried how far, by inoculating the human subject with the small-pox matter of sheep, it would protect them from the human small-pox. The experiment was tried upon some children; but there was no susceptibility evinced in their constitution to take the contagion: it merely produced a little local inflammation, which died away in a few days, without producing any pock or constitutional fever. Sheep were then inoculated with the same matter as was employed upon the children, and it produced the variola ovis well and fully developed.

In inoculating sheep, the operation should be performed either on the inside of the thigh or fore-arm, or, still better, under the belly, as it does not then interfere with the progression of the animal, and is, consequently, attended with less pain. The operation consists simply in introducing the point of the lancet carefully under the cuticle, betwixt it and the true skin, but so as not to occasion any loss of blood; as it might, by carrying the matter out along with it, or diluting it too much, render it of non-effect. You then arm another lancet with the matter recently taken from the pock, and introduce it under the cuticle, pressing gently upon its point as you draw it out, that the matter may be retained. Some simply make slight scratches with the point of the lancet, and rub the matter on; others soak a little cotton in the matter, and pass it under the cuticle, leaving it there.

The general treatment of the disease is the same as when naturally taken. The matter selected should be taken from the pock in its limpid state, about the seventh or eighth day: after that period it

loses its efficacy daily. But the period at which it is taken must depend upon the fever being perfected, and the pock fully matured, taking care in extracting it that it is not mingled with blood.

After the same matter has passed through twelve or fifteen lots of sheep it loses its efficacy, and requires to be renewed from sheep having the natural pock. This is one great drawback to any general systematic course of inoculation as a protection to flocks.

Matter taken from regular and confluent cases produces equally regular and irregular small-pox. Sheep have been inoculated with matter taken from those that have laboured under the rot, consumption, and also the itch, yet it has only begotten the pure disease; nevertheless, it is safer and wiser to take it from healthy sheep.

The desiccated crusts will not give the contagion, nor yet inoculating with the blood; but I should have little doubt, if the blood of an infected sheep was transfused into a healthy animal, of its communicating the disease; as in a quantity of blood like what would be required there would be a full *quantum* of the *virus* to produce the desired effect.

In conclusion, strict injunction should be laid upon parties, 1st. To carefully keep asunder from the healthy stock, all individuals, every description of animals, and even the buckets, utensils, &c. that have any connexion with the diseased ones. 2d. Never to conduct, or allow to pass, any healthy stock along the fields or roads which the diseased ones have traversed, as, from the contagious matter becoming deposited upon rails, the ground, &c., and which preserves its virulence for an indefinite period of time, it would immediately give the contagion to others that are healthy. 3d. As much as possible rear your own stock; or, at any rate, do not purchase fresh stock at either fairs or from parties who traffic in sheep, *alias* sheep-jobbers, but only from those well-known, and who can give you a clean bill of health. 4th. Be particularly careful in folding your diseased sheep sufficiently far away from the healthy stock, taking care that the fences are all in good order; keeping them strictly to that portion of your farm; and also see that your neighbours rigidly look after their fences. 5th. Be particularly careful not to allow too many sheep to be crowded together in your sheds or out-buildings; as from the intolerable stench emitted in this disease, it would be attended with fatal consequences. I should recommend the infected sheep to be folded clean away from the homestead buildings, and temporary sheds erected for the worst cases. 6th. Be choice in the food given, only giving it in very moderate quantities, or as it is eaten up. 7th. Ventilate freely the places for the reception of your worst

cases, avoiding cold drafts. The air-holes should be made towards the higher portion of the building, so as to allow the effluvia to get away, without permitting the wet to come in; also never allow the food not eaten to remain too long before the animals, but take it away, and dispose of it in such a way as not to come near the healthy stock. 8th. Allow no dogs to come near the infected sheep, not even the shepherd's dog. 9th. Enjoin strict cleanliness. 10th. If it is needful to buy provender, purchase from those parties free from the disease; but, if possible, neither buy nor sell. 11th. Avoid bleeding your stock as a precautionary measure, and also all quack nostrums, and remedies as preventives; but, should your stock be attacked, place them under the surveillance of a regularly educated veterinary surgeon. 12th. When any of the animals die, *bury the whole carcass with its fleece very deep*. 13th. Let the portion of the buildings devoted to your worst cases be fumigated, if possible, once a-day (taking care the sheep are out at the time) with three parts common salt, one of oxide of manganese (if it can be got, otherwise leave it out), and place them in a warm earthenware pipkin; put it in the buildings, and add two parts of oil of vitriol: stir them well together with a stick, close the doors immediately for a short time, and then fling them open. As soon as the fumes are passed away, the sheep may be turned in again; but where this is inconvenient, do not fail employing chloride of lime, as previously directed.

Trusting that the information conveyed in the above paper may be found useful to my professional brethren, and of service to the agricultural interest of this country,

I remain, &c.

Oct. 19, 1847.

SOME OBSCURE LESIONS UNMASKED,

INCIDENTAL TO THE FORE LEGS OF RACE-HORSES, RESULTING
FROM THE OUTRAGES COMMITTED BY THE TRAINING OF
TWO-YEARS-OLD STOCK.

By JAMES TURNER, V.S., *Regent-street.*

I FAIN would exhort noblemen and gentlemen of the turf to take warning from the exposition I am about to make of only a *portion* of the evils resulting from the premature work imposed upon the *growing* limbs of their equestrian treasures (the fairest of the creation next the human). A rude joint in mechanics is somewhat

complicated; but, when man's ingenuity is taxed to the uttermost of such mechanical contrivances, we know by experience that the machine is liable to get out of order, when in use, in proportion to its complexity. But how much more prone to derangement must be the joints of animal mechanism, when we reflect that delicate nervous tissues take immediate cognizance of the slightest jar!

In slow locomotion there is little or no concussion, but in quick progression there are structures especially adapted to ward off concussion, and which are complicated in proportion as they approach the ground surface.

At the back of the fetlock we find those exquisitely delicate structures, double joints, which have to perform the combined mechanical offices of pulley and lever, besides sustaining a portion of the superincumbent weight.

It is well known that the chief wearing-places of the racer's fore leg are the flexor tendon and its sheath—the suspensory ligament where it is single, with its bifurcating branches inside and out of the fetlock—also the cross-band ligaments of the pastern at the seat of ringbone.

When a race-horse has met with mishaps of either of these structures, and we happen to be called in by an intelligent trainer of some years' experience, the chances are as about ten to one that we find the seat of injury to be located precisely where he has described it. These persons are, in general, perfectly familiar with the important distinction between a clap of the main back sinew and the elongation or jutting out of the suspensory ligament.

I have not now taken up my pen to elucidate the above formidable every-day diseases, they having been already duly noted in our standard works and by lecturers; but this same practical trainer gives us a call, fidgetty and puzzled, and says he has a two-year-old in full training of immense promise and engagement, but is as loath to admit the existence of lameness as though the confession would be the forfeiture of his own life. At length it comes out, that he thinks his stride is *shortened* in his gallop—that he is somewhat careful in his slow exercise, particularly in declivities—that he drops occasionally in his walk, which he never used to do, and when in the stable does not stand firmly on his fore legs, as at first; then describes his sinews and ligaments as perfectly clean and fine, and winds up by declaring that there is nothing whatever to be seen to account for the strange falling off; but admits that, upon running the colt out in hand, he trots somewhat stilty in his action.

Upon this the consulting surgeon puts himself into the mail train, and probably by stable-time the following morning finds himself

located in some furthestmost corner of the kingdom. He takes especial care to manipulate the legs prior to any walking exercise; and soon finds that the trainer's description of the case was a graphic one, as not being within the sphere of vision of any non-professional; the back sinews, suspensory ligaments, &c., being in their normal condition, and likewise the front sinews or extensors perfectly free from that complaint of the racing stable commonly called *shin sore*. The short stepping in the trot is now proved by the professional examiner to be palpable lameness. The vet. pronounces it a case of *jar*, not *sprain*. Where? is most anxiously asked; of legs or feet?

This proves a hidden leg lameness: the practised eye has discovered the smallest perceivable angular prominence—the circumference of which would be more than covered by a silver fourpenny piece—upon the inner or outer ankle, as the case may happen to be, but more frequently the inner.

Now the cautious examiner, notwithstanding this striking indication of leg mischief, seals his lips as with a pitch plaster, until he has taken time to remove the shoes, and not only search the feet for all external causes of injury, but likewise thoroughly tested the condition of the navicular joint and internal foot:—finding all right there, he returns to a most scrutinizing examination of the faint abnormal indication beforementioned upon the ankle-joint, and finds a throbbing action of the metacarpal artery, an unusual dilatation of the veins in the vicinity, but the *angular point* will be discernible both by the eye and touch: he is then duly fortified, and boldly pronounces the case to be a shock imparted to the delicate synovial membranes lining the *sesamoideal* joints, through undue exertion upon structures necessarily *weak*, because in the progress of development by growth*.

I am not without my misgivings that so much confessed caution before pronouncing the precise seat of lameness might be attributed by the non-professional to a lack of knowledge on the part of the practitioner, or, what would be ten times more tantalizing, should the human surgeon thereby fancy our science only in its infancy, and our system of diagnosis crude and insufficient as to tact. If so, I hereby predict, at the risk of my reputation, that, with the accumulation of the wisdom of another century in addition (provided our patients continue *mute* as hitherto), our successors will not be one jot in advance of us in pointing to the true *seat* of disease; but I

* This pathological reasoning applies equally to young growing horses brought prematurely into the hunting field. Have I not in my eye many a lusty son of a yeoman who has recklessly committed this havock on brave colts for the glory of the brush?

am far from being so vain as either to think or say the same in regard to advance or improvement in remedial measures by the accumulated knowledge of future generations.

In my present paper I shall confine myself to merely pointing to the existence of a very obscure *leg* lameness. I use the word "obscure" in reference to the actual *seat* of mischief, and in contradistinction to frequent chronic disease of the inner or outer ankle, involving the same structures, but in which the articular or synovial surface of the joint retains its normal condition until it is eventually invaded by the stealthy progress of excrescence or ossification from *without*.

Seventeen years ago, in illustration of the wonders wrought by *deep firing*, I gave a description of this latter sesamoideal malady in THE VETERINARIAN of 1830, and *The Lancet*. Several veterinary authors have copied the passage with due acknowledgment: I have Mr. Delabere Blaine's *Outlines of the Veterinary Art* now before me, fourth edition, vide his note at page 603:—

"Mr. Turner, in his paper on deep firing, which appeared in *The Lancet* of September 1830, thus admirably describes this state, as it is often found in the fetlock joint. I will suppose a tumour on the inner or the outer ankle, contiguous to either of the sesamoid bones: this is a very frequent cause of lameness, the pulley-like joint formed by the sesamoid bones being more or less involved. This enlargement or bulge is to be met with rather more frequently on the *inside* of the fetlock joint, very near to the *cutting* place, but distinguishable from the effects of striking in an instant by the experienced eye. It is a diffused swelling, consisting of a condensation of cellular tissue and lymph effused under the skin, while the integuments preserve their original or natural thinness; but there is usually an accompaniment which completely stamps the character of the enlargement, viz. a slight projection or thickening of the inner or outer branch of the *suspensory ligament*, as may happen to be the affected side, just below the bifurcation: the other parts of the leg may be sound and clean, and the patient tolerably free from lameness, whilst at rest; but, when put to ordinary work, lameness ensues immediately. * * I need scarcely add, that this consolidation of parts originates, in nine cases out of ten, in a sprain of the elastic suspensory ligament. Sometimes *both* sides of the joint are similarly affected."

I now invite the attention of the veterinary profession at large, but more especially the deep consideration of veterinary students, to sesamoid disease, as *commencing from within*, being an injury of a wearing place of the *leg*, as navicularthrititis is of the *foot*: not of such frequent occurrence, but typical of it, as commencing with articular *inflammation of the synovial membrane*, and in

its progress identical with, being marked by, all the phases of that destructive malady.

Racers and hunters being more particularly the subjects, the disease must in future, from its importance, occupy a place in our nomenclature, and may, perhaps, be designated "sesamoiditis."

The sesamoid most liable to injury is the inner one, in the articular cavity, receiving its portion of the lower extremity of the large metacarpal bone.

[To be continued.]

EDINBURGH VETERINARY COLLEGE.

To the Editor of "The Veterinarian."

20th October, 1847.

Sir,—IN your last number there is an anonymous letter from "A Practitioner," stating that in January last a young man "entered himself as a pupil at the Edinburgh Veterinary College," and, after remaining there about "a week," he returned home and commenced practice. The writer further states, that this individual, after attending the ensuing session, intends "presenting himself for examination for a diploma, as one having attended *two* sessions;" and proceeds to insinuate, somewhat at variance with his former statements, "that if a person be allowed to leave the College *dubbed* a veterinary surgeon," in little better than *five months'* study, it would be a derogation on his (the practitioner's) part to submit to an examination.

Now, Mr. Editor, I beg through you that the "*Practitioner*" will come fairly forward, and, under his *real* name, point out the person to whom he alludes; or any other individual he can name, who has, under circumstances such as he mentions, "been allowed to leave the College *dubbed* a veterinary surgeon."

I am, Sir,

Your's obediently,

JOHN BARLOW, V.S.

THE VETERINARIAN, NOVEMBER 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

It is not to be expected that we are to import animals from other countries into our own without entailing on our indigenous stock more or less of those evils to which such foreign animals may be especially obnoxious, supposing even we preserve our native *breeds* untainted. The fact of disease, and of disease of a more fatal nature, being more prevalent among foreign horses and cattle and sheep than among our own, we believe admits of no denial. Glanders and farcy continue rife among horses in many parts of the continent, while in Britain, through improved stable regimen, cleanliness, and ventilation, such diseases have become comparatively rare. In the French cavalry the average losses of horses annually amount to eight per cent., while in our own cavalry the mortality does not reach half that per centage. The vesicular disease and the pleuro-pneumonia, epizootics unknown in former days in our country, are both importations from abroad. And recently has landed among us a disease, which, unless our farmers and graziers resolve to set up a *cordon sanitaire*, seems likely to spread over the country and destroy hundreds of our sheep. The wisest policy for them will be, to have nothing whatever to do with foreign sheep; but supposing they do, then on no account whatever to permit such sheep, or even persons that have tended on such sheep, to commingle or come in contact with their own native flocks: the *ovine pox*, as the disease is called, being beyond doubt proved to be—the same as small-pox in man, to which it is nearly allied, if not identical in nature—highly contagious. Should Government, as it is to be hoped they will, adopt at once, in regard to the importation of foreign sheep, such measures of inspection or quarantine as will prohibit the sale, if not the disembarkation, of sheep either actually in a state of disease or even suspected of having the seeds of disease and contagion among them, probably we shall hear little or nothing more about the *ovine pox*. On the other

hand, should such sanitary precautions be no more heeded than the loud and sad cries for sanitary reforms in our large and populous towns have been, we may look for the establishment of a new and destructive epidemic devastating our flocks as pleuro-pneumonia has already devastated our herds; and we shall be compelled without delay to have recourse to what in the hands of French veterinarians has proved so successful, viz. *inoculation* of our sheep, while young, for the pox; the same as children used to be inoculated for small-pox. To the question, Would vaccination answer for sheep? we believe we may answer, unhesitatingly, No! —It has been tried and has failed. But more of this anon.

With equal pride and pleasure do we point the attention of our readers to the report of proceedings at the Farmers' Club, on the 4th of the past month, whereof an account is extracted from the *Mark Lane Express* into our present Number. It was an occasion on which we felt pleasure, because we found ourselves in the company of the professors of that science to which the veterinary art in our own country owes its birth, to which it is on one side by nature closely allied, and with the practitioners of which there appeared every disposition, on the occasion in question, that we should, as in former days, return into scientific and amicable association. It was an occasion on which we felt pride, because one of our own body was to be "the lion" of the meeting; and that feeling was not a little enhanced when, as the issue shewed, the lecturer was found to have acquitted himself in a manner which, while it reflected every credit upon himself, reverberated no little of that credit upon the corporate body from which he emanated.

The history of the affair is shortly this:—So long ago as June last Mr. Arthur Cherry made a request to the President of the Farmers' Club, Fisher Hobbs, Esq., to be permitted to deliver a lecture or two at the meetings of the Club, a request that was received with kindly feelings by the Committee, and the result was, an arrangement with Mr. Cherry for the delivery of three lectures, the first to be given on the 4th of October. "The Diseases of Cattle" being the subject announced upon the members' cards of notice of the meeting, there was, naturally enough, evidently an

expectation prevalent among those assembled on the occasion, that *pleuro-pneumonia* would form the subject of the lecture: this the President perceiving, or knowing beforehand, took care, however, at the commencement to repress, by stating, that as it was Mr. Cherry's expressed intention to become a candidate for the prize of £50 offered by the Royal Agricultural Society for the best essay on that subject, the members must, on the present occasion, excuse his silence on it any further than general allusion to it, since premature disclosures of his views and opinions on the subject might tend materially to detract from the novelty or merit of his intended essay.

Desirous, therefore, of steering clear of the *diseases* of cattle, Mr. Cherry had to transfer his attention into some other province of the cattle department, in which the farmer or grazier would find himself, if not equally at least sufficiently interested; and he could hardly have made a more fortunate hit than he did when he selected *HYGIENE* for his subject; one for which, all-important and full of interest and wide in range as it is, singularly enough, as Mr. Cherry remarked, in truth lacks in our mother tongue a *name*! and therefore have we borrowed the French one, *hygiène*.

In calling Mr. Cherry's discourse "a lecture," we must not omit to add, that it was *vivâ voce*. We have reason to believe that it was his intention to have read most part or all of it from a roll of papers he held in his hand: so thoroughly, however, did his mind prove, as the issue shewed it to be, imbued with his subject-matter—so prepared was he to propound and prompt to answer in every department of it, that the result was, an oration full of matter of that description which carried with it the conviction that the lecturer had actually seen and felt and practised what he was discoursing about. He had not emerged "fresh from college," neither had he descended in his dressing-gown and slippers from his attic study into the lecture room. No!—he had come out of the cattle-yard, out of the sheep-fold, out of the piggery; he had come prepared to talk to "farmers and graziers" in their own language; to shew them in what manner and to what extent veterinary science could lend them aid in the care and management of their live stock, and the ways in which their routine management admitted of improvement. And the result was, a discussion among the members present of an animated and highly interesting cha-

racter, replete with practical remarks and illustrations, which the President at the required hour felt himself with evident reluctance compelled to bring to a close.

The Petition of the Governors of the Veterinary College and Highland Society, printed in our present number, was read at the last meeting of Council, as our report will shew, without remark: nor is it our intention here to say one word on the subject, further than that, for a full and sufficient reply to it, and to that part of it in particular in which is contained the notable allegation of the Professors of the Veterinary College, our readers will have but to turn to the "Objections" to the suggested "alterations," contained in our volume (xix) for this year, page 517 et sequent.

Extracts from Domestic Journals.

LECTURE ON THE DISEASES OF CATTLE.

[Corrected from the "Mark Lane Express."]

THE monthly meeting of the members of the London Farmers' Club was resumed at the Club-house, after the usual interval during the harvest months, on Monday Oct. 4.

The subject appointed for discussion was "The Diseases of Cattle," Mr. Cherry having undertaken to open it by a lecture.

The Chairman said: Gentlemen,—I am happy to meet you again on this occasion, when we are about to resume the discussions of the club after an interval of three months. The club has, I think very wisely, arranged that during the harvest months it will not hold its monthly meetings. Gentlemen, we have selected a subject for discussion this evening which is a most interesting one to every householder in this kingdom. All present must be aware that the high price of meat is, in some measure, attributable to the serious losses which have occurred within the last few years as regards the cattle and sheep of this country. In my own county, during the last three years, the disease has decimated a number of cattle; and I am sorry to say that at the present time its ravages are so great that many of our leading farmers have declined purchasing any, in consequence of the serious losses which they have encountered and which they witness around them.

There is not only the loss by death, but the loss of flesh, the exhaustion of the carcass, consequent upon the disease (hear, hear). I believe that the public are not aware of the great loss to the community which this disease has occasioned within the last few years; and I fear that in all the districts of England from which I can obtain information the loss is still increasing. I know that in my own part of the country it has of late been very much increased by the introduction of foreign cattle. Instances have occurred—and perhaps I may, in the course of the evening, relate them to you—which shew that when part of a herd of English cattle are sent out to graze with cattle which have been confined in close shipping and brought from abroad, they will catch the contagion, and very serious losses will occur. Many of my own friends and neighbours have sustained most serious losses, some losing from twenty-five to forty, and in extreme cases even fifty, per cent. of their cattle; and up to the present time no one has come forward to recommend any remedy or cure which can be depended upon. Within the last two or three years I have done all that I possibly could, in connection with the Royal Agricultural Society, to invite the attention of the Veterinary College to this subject. We have contributed annually £200 a year, and I think that up to the present period we have not received our *quid pro quo*. I hope that in future we shall have it. The attention of the society is now directed to the subject, and a premium of £50 has been offered for the best essay on the disease. I fear that this may in some degree check discussion this evening; for I am happy to hear that our friend Mr. Cherry, who has so kindly come forward to give us his experience on the subject, intends to be a competitor for the prize. This may prevent him from giving us that information which he would otherwise be happy to furnish. Still, I feel persuaded that what he has to say on the subject you will hear with attention, and that whatever information is communicated will be given with a sincere desire to benefit the agricultural interest and the community at large. I feel rather strongly upon this matter. I regret that a greater number of the large graziers of the kingdom are not present. I can only attribute the fact to the early period of the year; for I know that in reality they feel great anxiety upon this subject—a subject in which I hope that, though this is the first discussion it will not be the last (hear, hear). I now beg to introduce to your notice Mr. Cherry.

Mr. Cherry then rose and said: Gentlemen,—In making the offer, which I did spontaneously so long since as the month of February last, to Mr. Hobbs, your chairman, I did so merely with a view of making what little information I possessed serve the purpose, if not of arresting, yet in some degree of mitigating, a

disease which is so prevalent, and from which we are suffering such ravages. It is not a trifling matter to contemplate that which has baffled almost all attempts hitherto made to arrest its progress. But it strikes me that the efforts which have been made have not been made in the right direction; that we have all been looking at the disease medically, and seeking to arrest the results, instead of removing the cause which produced it. We must look first at the condition of the animal which is infected; secondly, at the condition which the two bear relatively to each other; and further, we must inquire what classes of animals have suffered the least, and why they have suffered the least; and by this means we must endeavour to ascertain whether the carrying out of plans which have been productive of good in one animal may not be equally productive of good in another, if followed out on the same broad and general principles. For the reason stated by the chairman, I feel myself in some measure tied on entering into a subject which is a very favourite one with me, and upon which I had prepared a good deal of matter to lay before you on this occasion; and understanding that I shall be prevented by the rules from dealing with any previous matter, I trust you will pardon me if I do not enter into that so fully as I had intended to do.

There are two distinct branches of the subject—one, the epidemic considered in itself as a disease; the other, that general condition or management for which we have not a word in the language, but which may be called “the science of hygiene,” or the doctrine of health, and its preservation. This latter is a subject which has been long treated on the continent, though greatly neglected in this kingdom, and it is one of essential importance. I think we shall find, on examination, that as much mortality arises amongst animals from the want of attention to the preservation of health as from disease itself (hear, hear). If I may judge from my own observation and experience in this matter, I should say positively that such is the fact. But, in order to be quite within the mark, let us take a smaller proportion—a fifth or a sixth. If you suppose that the entire loss is 10 per cent.—and it has been estimated at 15—if you take a fifth of that amount as being preserved, that will, of course, make two out of every ten. I have here a table giving something like an approximate estimate of the numbers of cattle, sheep, hogs, and horses in Great Britain. I estimate the cattle (that is, bulls, cows, oxen, heifers, steers, and calves over three months old) at 8,000,000; sheep of all descriptions (that is, rams, ewes, wethers, tegs, and lambs over three months old) at 50,000,000; hogs (that is, boars, sows, store pigs, and pigs over two months old) at 12,000,000; horses (that is, stallions, brood mares, geldings, mares in work, colts and fillies

after weaning) at 2,500,000. Now, I am well aware that much greater numbers have been stated. Calculations have reached as high as 120,000,000 for the aggregate of animals, while I estimate the numbers at only 72,500,000. Then, as to value, supposing you put cattle as low as £5 per head; sheep, reckoning them altogether at £1 per head; hogs at £1 per head; and horses at £20 per head. Now that gives as the total amount only £152,000,000; I find that some have placed the aggregate value as high as £316,000,000. I think the one estimate is as much too high as the other is too low; but the calculation of £150,000,000 is quite sufficient to shew the immense value of the property which we have to deal with. If upon that basis we take a ratio of 2 per cent. as lost annually, we shall have upon cattle a loss of 160,000 annually, worth £800,000; at 3 per cent. 240,000, worth £1,200,000; at 4 per cent. 320,000, worth £1,600,000; at 5 per cent. 400,000, worth £2,000,000; at 6 per cent. 480,000, worth £2,400,000. Then, upon sheep, at a ratio of 2 per cent., there was 1,000,000, worth £1,000,000; at 3 per cent., 1,500,000, worth £1,500,000; at 4 per cent., 2,000,000, worth £2,000,000; at 5 per cent., 2,500,000, worth £2,500,000; at 6 per cent., 3,000,000 worth £3,000,000. The loss upon hogs, at 2 per cent., is 240,000, worth £240,000; at 3 per cent., 360,000, worth £360,000; at 4 per cent., 480,000, worth £480,000; at 5 per cent., 600,000, worth £600,000; at 6 per cent., 720,000, worth £720,000. The gross value of cattle, sheep, and hogs thus lost will be, at 2 per cent., £2,040,000; at 3 per cent., £3,060,000; at 4 per cent., £4,080,000; at 5 per cent., £5,100,000; at 6 per cent., £6,120,000; while, if you take the loss at 10 per cent., which would not, perhaps, be an exaggeration, you will find that the gross value of the animals lost amounts to £10,000,000 per annum. If only one-fifth of these animals can be preserved, we then have the money value of £2,000,000, now utterly lost and totally irrecoverable (hear, hear).

We must also look at this question in a political point of view. Our population is increasing rapidly year by year, but our stocks are not increasing in the same ratio, and we have been obliged to go to the foreigner to obtain for our use a certain number of animals. Suppose the cost of the animals imported to be £2,000,000 per annum, the country is annually drained of a large amount, of which it is not likely ever to receive one farthing back again. Therefore, I consider it a matter not only of personal, but even of national, importance that we should endeavour to preserve our animals. But the question is, How is the existing evil to be met? In the first place, we may take animals individually, as regards their situation and position, and inquire in what state they

are generally found existing. In a domesticated state all animals are more prone to disease than they would be in a natural state; but we find that those animals who live in the closest approximation to a state of nature are still greatly disposed to disease. For example, a sheep lives in a nearer approximation to a natural state than any other of our animals; yet with how many diseases is it afflicted, and what ravages are frequently made in a flock! From three to six per cent. may be taken as the average annual loss in that class of animals alone; and at that ratio we sustain a loss of £1,500,000 per annum. Besides, we must look at the state of the animal in progressing towards a condition in which he will become fit food for man. We must look, first, at the animal itself; secondly, at the loss of food which would be useful for another animal; and, thirdly, we must take into account the money required to replace that which has been lost. We must embrace in our calculation not merely the loss of an animal, but the capital required to replace our loss.

The question arises, as to the best general treatment of animals; but before I proceed to that, I will make a few observations with regard to the spread of the epidemic. The first trace which I had of the malady was in the year 1835. In that year it commenced individually, and terminated in death after an illness of several months; however, very few cases occurred, and what took place in that year was only the *avant courier* of what was soon to follow. The matter went on thus until the following year, when I was called upon to attend that which appeared to me a new disease. The first patient that I had under treatment for this disease shortly died; and the investigation after death shewed the nature of the disease. Other cases rapidly occurred, and in July and August, 1836, the characters of the disease were rapidly developed. The first case occurred in Berkshire, just on the borders of Oxfordshire; and the disease next appeared to me at Brixton Hill, in Surrey. If you draw a line on the map, you will find that the disease proceeded as nearly as possible from east to west. In about two months it reached London. This was the malady under which horses suffered. In the following month of January it had got such a head that its ravages attracted great alarm; the frost, which was rather severe, brought it out with terrific violence, and the whole kingdom was suffering under it. But still, up to that period, other animals had escaped.

About this time I began to turn my attention to sheep, finding them in large numbers, and in a more favourable position for the investigation of disease than animals kept under corn, or treated artificially. In 1840 the disease broke out amongst horses and sheep simultaneously. I speak now of my own immediate dis-

trict. But for a considerable period before this I had heard that rumours were rife that there was a disease of an epidemic character prevailing in the west of England, more particularly in the low parts of Somersetshire and on the rich lands about Bridgewater. Thence it gradually spread through the upper part of Somersetshire, until, in the month of July, it was just on the upper border of the county of Wilts, where it jumped, about a fortnight afterwards, into the valley of the Test, then towards Basingstoke, and when it had reached that point it seemed to have acquired great force, and it spread rapidly throughout the entire kingdom. All these points are almost in a direct line west and east. But there were several lines parallel, as it were, to each other, and while the disease was advancing in the same direction, there was at the same time a small spreading out laterally, until, in the upper part of Hampshire, the lines seemed to coalesce. In a few months the disease was, as I have stated, rife from one end of the kingdom to the other; cattle, sheep, and horses, being all attacked. It even affected animals living in the state of *feræ naturæ*.

It was very peculiar in its course at that period, and, in fact, it is so at the present time. It would take one part only of a stable. There was one stall with a horse affected, another in which the animal was not in the least affected. It would take a farm in the same manner; and I have even known it take part of a flock. Swine were affected in the same way, and even poultry did not escape. There were some circumstances connected with it which are peculiarly worthy of notice. On investigation, I found an entire change in the system of an animal affected. Instead of finding blood which was full, rich, and sufficient to carry on the functions of life, I found watery blood. Such blood I detected in many animals long before the disease manifested itself; and so sure as I found blood in that state, so sure was the disease to take effect; the animal suffering under a complete prostration.

Now it is a difficult matter to trace the causes of disease; but in proceeding in the investigation, we must look first at the premonitory condition, and, secondly, at the condition under the disease itself. As to contagion, a great deal of doubt exists on that subject. I have exposed my horses over and over again without the slightest evil effect. There is one point which must never be lost sight of, viz., that when an animal is in a predisponent state for disease, the slightest thing will act as an exciting cause. But the question which we have to consider is—What produces the disease under the operations of which we are suffering. Upon investigation, we find there is no difference as to locality. We find the epidemic as prevalent on the hills as in the valleys; we see it

in crowded situations, as well as in those which are not crowded—where there are great numbers of cattle as well as where there are but few. Still it must be remembered that circumstances may modify it. An animal which is kept alone may not have the disease so virulently as others which are confined together in masses; and it is certain that where animals are confined together in a small space, with impure air, there will the suffering be most severe. Wherever an animal, however, is in a predisponent state for disease, we shall find that, if placed in contact with another animal previously suffering under it, that animal will be affected. Take a flock of sheep, or a herd of cattle, in a predisponent condition, and introduce among them other animals in a diseased condition, the disease will spread through them all at once, and you will have all the characteristics of contagious disease: whereas, if you place among them animals which are not in this condition, you will not find them suffering at all.

Now, as regards the origin of the disease, it is thought by many that it travels in the atmosphere; but how, in that case, it is generated it is impossible to say. It may proceed from the effluvia arising from the animals themselves, or from electric disturbance. Another cause to be assigned is connected with the food of animals. During the period to which I have referred there had been a great deal of blight among the grasses, the clovers, and the sanfoins. There was a great deal of this food blue and blighted in appearance; and though animals eat it, yet it must be remembered that they do not thrive upon it. This was the case, to my own knowledge. Impure food, in the early growth of animals, may have produced, or rather added, to the predisponent condition, while the effluvia arising from the animals, and other causes, bring that predisponent condition into a state of activity.

Now the question arises—How is such disease as this to be met? It must be met in two ways; first, by the proper medical treatment, to supply the defects existing in the component parts of the body; and, secondly, by general treatment and management. Upon the first point I cannot now enter, as I had intended, for reasons which have been already stated. It is, however, of great importance, I think, that we should enter upon the question of general management, or what is called “hygiène.” And here we find very important circumstances around us. We have animals placed in different positions, some of which are fed high and some low; and without now inquiring under what circumstances we shall find the greatest progress made towards the production of the largest animals from the smallest amount of food, it is sufficient to say that this is the question for general consideration.

In making the remarks which I am about to do, I probably shall

not state anything but what is already known; but in the collecting together of instances, in the drawing of inferences from known facts, and in endeavouring to reduce the isolated knowledge, which now exists so plentifully, into something like a system or science, I consider that we shall be advancing, in some degree, in the mitigation of a prevalent evil. In the first place, we find that an animal will not bear wet and cold without injury; and if he be exposed to such debilitating influences, a larger amount of food will be required, involving, I need not tell you, a positive loss. Now, we cannot house all the animals whose numbers I have just given; but we may house a portion of them; we may select a few from the rest, put them into a hovel or a sheltered yard, nurse them at the commencement of an illness, and by such means secure that instead of ailing for weeks they shall only be ill for days. Take the case of swine. You frequently find that a hog, when fattening, turns sick and refuses to take his food. Remove the exciting cause, over-repletion, and you will find him fattening more quickly, and in a better way than he did before. The same remark will apply to sheep and to animals of every kind. Wherever you find land wet, you find disease prevalent. In like manner you find disease prevalent where the homesteads are bad, sinking into a hole; where the stables and other buildings are low; where the cow-stalls are dirty, and there are no means of removing the excrements and urine. All these are points connected with hygiene, falling under the head of general management, and coming within the scope and compass of every one.

Instead of vainly lamenting an illness, we should all of us endeavour to remove the cause. Often when there is an inveterate scour, it will be found, on examination, that it arises from a filthy stall, having that sour, unwholesome smell, which I need not further attempt to describe. Remove this, leave the animals merely to nature, and they will, perhaps, rapidly recover. Swine, which are, I know, considered by some to thrive best in filth; wash them, give them clean straw, attend to their condition, and you will find them thrive far more than animals which are destitute of these advantages. Again, take milch cows, give these animals clean beds, remove the dung from their straw, comb their coats, nay, even clothe their bodies, and then you will find that the vital heat, instead of being wasted, is collected and laid by in the form of fat or richer milk. By such means we effect two objects: we produce a greater amount of fat on the animal, and we economise the consumption of food from whence that fat is made.

The next consideration which comes before us has reference to the various functions of an animal, and to the question how far those functions are influenced by external causes. There is a pre-

liminary question, however, to be dealt with, before we can arrive at any sound conclusion: viz. What do we really mean by health? This may seem a very simple question to put, but it is really one of the most difficult questions to answer. Many will say, perhaps, "We know that our animals are in health when they are thrifty." But, in truth, animals may be thrifty with a mass of disease in their lungs or their livers. The condition of the disease may not be such as to prevent them from thriving. To say that an animal is healthy, and to say that it is healthy because it is thriving, are two very different things.

It is one of the wise provisions of nature that every function of the body has the power of correcting or assisting other functions. Thus we find that when the lungs cannot throw off the due proportion of carbonic acid, the liver will assist them in doing so. This we see exemplified in the case of those who are suffering under consumption; they almost always have diarrhoea arising from the derangement of the liver, and this arises from the effort made to get off that which they cannot get rid of through the lungs. Thus, with regard to lambs which have the black scour, if you watch them you will find that they do not inhale the proper volume of air; you see it also occasionally in cattle, though it is not so prevalent in those animals, because not so easily excited; they are not so frequently put into a state in which the lungs are apt to become diseased. You find it occasionally amongst ewes which are suffering from the results of difficult parturition. It is very frequent amongst swine under that form which is commonly called murrain. I am greatly disposed to believe that murrain generally results from the confinement of animals in impure styes, or damp muck-yards.

I need not say that the perspiration, bile, urine, saliva, and respiration are some of the principal functions of the body. Now, as long as these are in a state of equilibrium one with the other, nature possesses the power of resisting disease; but, supposing anything should arise by which a single function becomes either suspended or excited in too great a degree, the effect is to destroy the equilibrium, and in proportion as that is more or less deranged will there be danger to the animal's life. Of course, therefore, the earlier we can deal with the disease after the disturbance of the equilibrium the better will be our chance of restoring it. If an animal be exposed to a cold, north-easterly wind, it would be chilled, and probably the cold will be accompanied with an attack of fever, unless proper precautions are taken. If, after exposure to cold, the animal be taken into a warm place, and bran or chaff be given to it, probably by the next day it will entirely recover; otherwise the illness will progress from simple cold to fever, and

ultimately, instead of having a simple disease to meet by a simple remedy, you have a complicated disease with which it is extremely difficult to deal.

I cannot help remarking here, that those animals which are called tender are in reality generally the hardest; it is only in appearance that they are tender. The sheep and cattle, which are called tender, never yield to a slight attack: when they yield at all, it is only to a disease which would in the state of nature inevitably produce death; a simple attack would be thrown off by nature itself. I must observe, that you may detect the derangement of health quite as soon in sheep with their woolly coat as in the most highly-fed ox or cow.

The next consideration has reference to food, the nature of which has a very close connexion with disease. How is food to be given? Is it to be given wet or dry, in large or in small quantities? What is to be its character? These are essential points in an inquiry concerning the general state or thriftiness of an animal, and in investigating the disease on a large scale it is imperative that we should include them. When an animal is ill, we should ask—What is the cause of this? Possibly it may be confined to one single animal; but in a matter of this kind it is desirable, at all events, to remember that, by ascertaining the cause, we shall be placed in a position to put an end to the evil. This remark applies to horses, cattle, sheep, swine, poultry, and all other animals.

Then in our buildings, as regards air and ventilation, there is a lamentable deficiency in our general farming. With very few exceptions, the cow-shed and the pig-stye are a mass of filth, very crowded, and wholly inefficient for the purposes intended. Our buildings have not kept pace with the improvements in other respects. Not long since I was in the stable of Mr. Trotter, the late member for West Surrey, near Epsom—as fine a stable as there could well be, and exactly suited for the purpose.

There is a point connected with ventilation which ought to be noticed. The agriculturists have unconsciously been pursuing a very beneficial course by the use of disinfecting materials, such as gypsum, laid down under stalls and similar places. This was done originally for the purpose of getting a larger amount of manure. The gypsum decomposes the ammonia produced by the urine. Besides this, there is another matter connected with manuring. The dung is quite as bad as the urine in its effects. There is a combination of these two things plastered on the floors, accumulated on the walls, and generated in every part; and this goes on, day after day, until the whole place becomes a sink of filth. Very little was done on this point till a recent period, if we except the result produced unconsciously by the cause which I

have mentioned. The only person who has treated this matter scientifically is Mr. Wm. Percivall, veterinary surgeon of the First Life Guards; and I shall, without further comment, read an extract from some statements which that gentleman has made. After speaking of defective ventilation and its results, he proceeds to say :—

“But there is another source of impurity—if not a greater or more harmful one, still one of acknowledged evil, and one against which, so far as we know concerning it, there is every reason that we should endeavour to efficiently protect the animal—and that is, the effluvium from the urine and dung of the animal, and in particular the former. It will be said, perhaps, that drains carry away the urine, and that the dung is no sooner dropped than it is removed out of the stable. We would remind those persons, however, who may sit down satisfied that no harm can arise from such sources in stables which are drained and kept clean, that in these stables stench, even to a greater degree, is likely to be generated from the *dispersion* of the urine upon the floor; seeing that males and females cannot both stale through the same barred receptacle in the stall. And, even supposing such was the case, the cesspool underneath the barred grating never ceases to emit urinous effluvia, though such may be more evident immediately after staling, or any agitation of the contents of the cesspool, than at other times. In a stable where the drain and receptacle for the urine are behind the horse, there must be necessarily a greater dispersion of fluid upon the floor, and a corresponding amplitude of surface for unwholesome evaporation. The stable, however, which of all others appears to generate this urinous atmosphere is the one unfurnished with any drain or receptacle for the urine; wherein it is suffered either to diffuse itself over the flooring and disappear through being absorbed by the soil in the interstices of the pavement, or by the pores of the pavement itself (such as wood), or else through evaporation from the wetted unabsorbent surface. In either case urinous vapours will arise in abundance.

“That the ammoniacal gas furnished by the urine of horses—to say nothing about any noxious effluvia their dung may emit—is of an injurious, if not a poisonous nature, no man will doubt who has ever in his life entered, the first in the morning, a stable containing several horses, the doors and windows of which have been kept all night close shut up; his eyes will not fail to convince him, should his breath and smell not inform him, of the ammoniacal noxiousness of the confined atmosphere. Supposing the windows of the stable had been opened, or that due ventilation had been afforded, undoubtedly the atmosphere would not have been of the same offensive description. Still, however, would the

sources of such impurification have remained, the difference between the ventilated and unventilated stables being simply this—that, from the currents or circulation of air generated in the one which were wanting in the other, the atmosphere of the former would have been by so much the less contaminated with ammoniacal gases. But can ventilation, however effective, entirely free the stable atmosphere of such gases? Will the urinous surfaces and gutters cease to emit them? And would it not be more rational that we should look a little to the *fomes* of impurity, rather than exclusively bestow our attention on ventilation? Does ventilation remove the stench from any corner of the street that may have been used by the passers-by as a place of urining? Rather, is not our nose sorely offended every time we pass a place of this description, even though it be completely out in the open air? Not that, for a moment, we would decry ventilation. At the same time we cannot but regard it as a matter not consonant with reason that we should devise every means of getting rid of a stench or impurity save that of removing or rendering unproductive the source of it. It is like a man who, having to sleep with a chafing dish of heated charcoal in his room, opens the window, lest before morning he should be suffocated; when, by putting out the charcoal fire, he might have gone to bed without the slightest apprehension.”

Now, Sir, that gentleman has been making some very important experiments in the stables of the First Life Guards, at the Regent’s-park barracks; and though I may appear to be now touching on a point rather foreign to the subject of the diseases of cattle, yet I must remark that the same observation applies to all; and these experiments, having been carried on under favourable circumstances, are, on that account, the more valuable. Sulphuric acid in dilution was tried by this gentleman, and the result was certainly very satisfactory. He says:—

“The prescribed method of using the vitriol was, that it should be diluted with nine parts of water, and that saw-dust, thoroughly wetted with the mixture, should be sprinkled over the flooring of the stables, those places being the most plentifully supplied which afforded any lodgment for the urine. This was done, and the result was more or less effervescence wherever the acidulated saw-dust came in contact with the horses’ urine, with evident extrication of gas, and of that exceedingly offensive description, that it became a question whether such gaseous emission was not likely to be even more obnoxious to the inmates than the urinous exhalation itself. What, however, rendered this discharge of gas most perceptible and unpleasant to us who were in the stable at the time was, the pouring of the acid and water mixture, without the

saw-dust, over the flooring of the stable, through a garden watering-pot. When thoroughly wetted in this manner, and the mixture had begun to soak into the soil between the crevices of the pavement of the stable, which had become super-saturated with urine—the deposit of years—the surfaces became everywhere covered with creamy effervescence; while the disengagement of offensive gas was so great that to hold our noses over the effervescing surfaces was, from the intolerable sour fœtor arising, next to impossible. On the following day the same acid watering was repeated, and for two successive days afterwards; the effervescence on each day being manifestly less, and a vitriolic or sour odour becoming prevalent over the sickening gaseous discharge which the first watering occasioned. Since this the stables have remained without any farther dressing, and the result has been such a complete super-saturation with acid, that the ammoniated and urinous odours have been altogether suppressed. The vitriol used was the *brown*—the sulphuric acid of commerce—which, at the manufacturers, is purchaseable at about a penny a pound.”

This stable, which contains, I think, fourteen horses, I visited last Tuesday, when a considerable period had elapsed from the time when the vitriol was applied, and when there was a greater accumulation to be acted upon. The stable was remarkably sweet, and the vitriol had produced the desired effect in a most efficient manner. The next thing that was tried was “a rough, impure sort of sulphate of lime, said to be a product in the manufacture of acetic acid, resulting in the decomposition of the acetate of lime used for that purpose. Instead of being white, like gypsum, it had a dark cinder-like appearance, which was said to be owing to its having become impregnated with the tar coming from the wood (commonly beech) burnt on such occasions. We found it very pulverizable, and that its powder was dry and absorbent: we therefore deemed it best to sprinkle the flooring of the stables with it, the same as we would with so much sand, and the result proved very satisfactory. A box used for sick horses, and which had been, from its faulty pavement (being very uneven and full of holes), noted for an offensive atmosphere, particularly in the morning when the litter was first taken out, was, after one pretty copious sprinkling, deprived at once of its offensiveness, nor has it, in the face of subsequent dressings, since returned. This sulphate of lime, to be procured at the acetic acid factories, is extremely cheap—a few shillings will purchase a cart load; and it is, we should say from our limited experience, well worth further trial as a purifier of stables.” I consider not only ventilation, but the proper management of manure, extremely important to agriculturists; and, if the system of taking sheep into the house to feed,

which has latterly been introduced, be extended, the sprinkling of gypsum upon the floors will be found highly valuable, and as beneficial as under the circumstances stated. The great difficulty connected with the bringing of sheep under cover to fatten, which, under such circumstances, they do much more rapidly and upon less food than when running about exposed to all kinds of weather—the great difficulty, I say, is to keep them clean when they are thus brought into a confined space. When collected together, their coats send forth a great quantity of effluvia. Every one who has been to a fair must have noticed a peculiar effluvia arising from sheep which are penned together. There is much effluvia given off from the hides of sheep under ordinary circumstances; but under the circumstances mentioned, there is a great deal of noxious matter, which they are liable to breathe. This is of more importance than is generally supposed.

Independent of effluvia arising from bad air, in a stable or other building, another fertile source of impurity and disease is to be found in marshy, damp situations. I cannot but observe that, although in districts where there are running streams of water, the meadows are very serviceable, as enabling the grazier to feed off his stock at an early period; yet the injury arising from the nature of the situation is sometimes quite equivalent to the advantage gained. The air which is saturated with too much moisture is, of course, inhaled by the animal, whose feet, legs, and whole body suffer from the same cause. If an animal be fed in a low situation, it is desirable that it should not be left entirely to such a situation; except, perhaps, during the heat of summer: it will actually get fatter in better situations, though fed upon an inferior kind of food, than if fed upon rich food when exposed to the deleterious influence of cold and damp.

Another point connected with feeding has reference to chaff or hulls. The use of this must be considered in relation to the animal to which it is given. To cattle and sheep you may give this chaff with great advantage, because there is a double mastication. It consists of the husks of wheat, barley, oats, clover, &c.; in fact, the refuse of the threshing barn. In proportion as the hull coop is large, you find two maladies prevalent; one, broken wind, the other, gripes. Do away with the hull coop, and you find those diseases subsiding. It may be asked, "What is to be done with this refuse? Is it to be thrown away?" Certainly not. It may be given to sheep and to cattle without any bad effect. That which you give to the horse passes out of him totally undigested; but if you give it to sheep or cattle there is no bad result, because the food is completely ground in mastication. If you take hay from sheep and cattle to give it to horses, and if you take from

horses their customary chaff and give it to those whom you have deprived of the hay, thus making a sort of exchange, you will find instead of deterioration a great benefit to be the result: the horses will have a much less tendency to swelled legs and to coughs, of which this is a frightful source. This is an evil which is not generally felt in the neighbourhood of London, because the greater part of the horses here are fed upon grass lands; but in some districts this has been the method of feeding farm-horses from time immemorial, and it is still generally retained.

Let me explain why it is that food thus given has such an injurious influence on the animal. When food is taken into the mouth it has to be ground, as you would grind any thing into powder in a mill. An important thing connected with the process is the saliva or spittle of the animal. This is poured out in a large stream on each side of the mouth; and the food, being mixed up with it into a pulp, passes thus into the stomach. The quantity of saliva during the twenty-four hours I estimate at several quarts. I am speaking of cattle and horses; it will be in the same proportion for other animals. This secretion is of an alkaline nature. Being mixed with the food, I repeat, the whole passes into the stomach. You there find a secretion known by the name of the gastric juice; and a change there takes place, which is complete so soon as the food has passed from the stomach into the intestines. In this last stage it is mixed with a secretion, or rather an excretion, called the bile; a separation then takes place between the digestible and the indigestible, and while the former is absorbed, the latter passes away in the shape of fæces. I need hardly tell you that, if food instead of being masticated is bolted, disease must ensue; and it is necessary that means should be adopted to prevent this.

Now, so far as concerns those animals who perform a double mastication, the food is ground into pulpy masses; and, having passed into the proper receptacle, it is again finely ground with a fresh supply of saliva. Now, Nature would not have made these two provisions were they not essential for the well-being of the animal. If you give an animal food which is not sufficiently ground or mixed with the due proportion of saliva, it will not thrive. This is the reason why horses will not thrive upon barley; there is not a sufficient quantity of saliva to render the gastric juice capable of acting upon such food to the necessary extent. Let me here say that it is necessary not only to attend to the quality, but to see that there is the due quantity of food; for unless the organs of digestion are supplied with a sufficient quantity, digestion cannot go on properly, and disease will result.

I am very much disposed to consider that the feeding of swine

entirely upon barley meal, made thick, is founded on a fallacy. I question whether they would not get quite as fat upon a mixture of barley meal with pollard. I am not sure whether this point has been sufficiently tested to warrant me in laying down a positive axiom, but the matter is certainly worthy of consideration. At all events, attention must be given to the quantity as well as quality of food. Animals will get fat upon straw, though it contain but a small quantity of nourishment. Feed a horse upon oats alone and he will become emaciated; give him plenty of straw, and he will get fat. This arises from the circumstance that in the one case there is, and in the other there is not, a sufficient bulk for the digestive organs to act upon. Hence arises the fact, that all animals appear to get fatter on green food than on dry: it is merely because there is in the former case a greater bulk than in the latter. With regard to the steaming of food, that practice appears to have been growing of late—and I think justly—into favour. A striking fact in connexion with that subject has come to my knowledge. A quantity of vetch hay which was very musty, as such hay often is, had been got together, and several stock horses were fed upon it. The result was, that the animals became very thin. It was suggested that the same hay should be steamed; the suggestion was acted upon, and then the animals got into good condition. I am disposed to think that by this means a great deal of indifferent food might be made much more beneficial. The cooking of food is a very important point in consideration of this subject, and a given quantity of vegetable matter in a steamed form will produce much better results than in the raw form. How far the extra expense would justify the carrying out of such a practice on a large scale is another question. Probably the general adoption of the practice of cooking will be the termination of discussion on this subject, but our progress will be slow towards such a result. In years of scarcity in the north, fine sawdust is frequently mixed with the food of horses, and also the inner part of the bark of the pine. This is merely given for the purpose of distending the stomach. The quality of water has great influence upon the condition of animals. Animals frequently have what appears to be good water, when, in fact, they are loath to it, and bloody urine sometimes arises from the use of it. As many evils arise from bad water as from scarcity: I have seen fearful consequences proceeding from that cause.

Now, these various points, gentlemen, must be looked at as a whole, before we can arrive at any correct general conclusion. Without recapitulation, let me say that the most desirable way of meeting the evils that exist is to endeavour to get rid of their causes; first, by the more perfect cleansing of the stables, buildings, and sheds; and, secondly, by the draining of the yards. This

latter point is especially important. If you let an animal lie on a dry place, you will find it thrive. You will almost invariably find sheep and cattle lying in the course of the drains. Why is this? Simply because that part is the driest. I here observe that the dew does not often hurt a man who lies beneath it. I believe that a man may lie down under the influence of dew with impunity, provided the ground itself is not moist. If the ground be moist and cold, there is an exhalation constantly arising from it, and a consequent chilling down of the vital powers which they cannot bear up against. Now, to mitigate such evils, there are used in some places hurdles thatched with straw. Such contrivances break the force of an easterly wind, and are on many accounts desirable. If an animal is ailing, and you put it into a warm situation where it will have comfort and protection, it will probably soon recover and begin to thrive again; whereas, if such precautions are neglected, it cannot be at all surprising if illness result in death. It is a *sine quâ non* that the animal should have comfort, and that care should be taken to give it only the right kind of food. Heat alone affects animals by producing great exhaustion; but heat with drought dries up the blood, and causes the secretions to be passed with difficulty. The most mischievous evil of all is wet with cold, especially if accompanied with easterly or north-easterly winds; it seems then to have such influence upon them, that they are glad to obtain any shelter they can find. In such cases, and where animals are placed in such situations, it would be easy, by means of a few hurdles thatched with straw, to give such a break to the wind as could not fail to be beneficial. Again, with respect to cattle, the tender ones should be driven, under the circumstances alluded to, into pasture which is comparatively sheltered, or even, perhaps, to the homestead. It may seem out of place to speak here of horses; but I have observed over and over again that horses which are allowed to run about at night are, on the average, less healthy and less capable of bearing fatigue than others which are kept in the stable, where they have more warmth and comfort. My own experience enables me to speak on this subject with some degree of confidence. It is indispensable that the stable should be perfectly pure, warm, and comfortable. A similar observation is applicable in the case of sheep, cattle, and swine.

These, then, are the remarks which I submit on the subject of general management. I have not made any in the medical department, because that requires a great degree of study, and I might have only led you astray by entering upon it. That subject will be infinitely better treated by those whose especial duty it is to consider it, and who are day by day in the constant prac-

tice of witnessing disease in its various forms, and of dealing with symptoms which an unpractised eye might never detect. The other part of the subject, however—that of general management—especially belongs to the owner of cattle. To that question too much attention cannot be directed; and I am quite positive that if the principles to which I have called your attention be thoroughly carried out, very beneficial results will ensue, and especially that less of our animals will be carried off by disease than are lost under the present system of treatment (cheers).

Mr. *Turner* then expressed the extreme gratification which he had felt in listening to the lecture which had just been delivered. The subject was one of the most important that could be discussed at a meeting of agriculturists. He attached especial value to the remarks which had been made on the line of demarcation of health and disease, and he thought that until more attention was directed to the means of preventing disease, great loss would continue to be sustained.

Mr. *Aitchison* said a great deal had been spoken that evening on the subject of preventing disease, and he had one statement to make which was closely connected with that subject. About six years ago he acquired the management of twenty-four horses. Before this time these animals had been hotly and closely stabled at night, and the farrier's bill amounted to several pounds every year. Dissatisfied with such an expense, he decided that, instead of being stabled as before from Michaelmas until Lady-day, they should all be turned into a comfortable and open yard. This was done, and during three years he did not pay £2 on their account. At night they were turned into a warm, comfortable yard; at five in the morning they were just put into their stable for a short period before going to work; and whereas there had been immense disease previously, under this new arrangement there was hardly any. He would like to hear Mr. *Cherry's* opinion on the question whether it was better that horses should be turned out or stabled.

Mr. *Cherry* observed, in reply to Captain *Aitchison*, that he had collected from his statement, that the stable in which the horses spoken of by him had been confined was close and hot, and probably there was an accumulation of filth in it; whereas the yard was comfortable. Under such circumstances, the latter might be the best for the animals at night. If it is possible, however, to obtain a well-ventilated and well-managed stable for them, then there could be no comparison between the open air and shelter. To animals shelter was every thing, and the grand object was to combine warmth with purity. The children who ran wild about the streets of London during the day continued healthy, on the whole, so long as they had shelter at night. He had invariably

found that horses which were exposed to cold were not able to perform the highest amount of work. With regard to the epidemic, I must say that, notwithstanding what I have heard this evening, I have strong doubts whether it is contagious. I have seen half of a flock taken, while the remainder have escaped. Nay, I have seen a hedge-row dividing two sets of animals, and those on one side have been infected, while those on the other continued free.

A general discussion ensued, but of too diffuse a character to require particular notice; but one or two points are worthy of consideration, and we insert them.

Mr. Cherry.—In the *Gentleman's Magazine* for, I believe, the latter part of the year 1756 (I speak from recollection), there is an account of a conviction by two country magistrates for driving infected cattle along a road, contrary to an order in council. Still, he repeated, they had nothing to do with the history of the last century so far as the epidemic was concerned. A great many animals died at that period, but they knew scarcely any thing of the circumstance, and the diseases disappeared about the year 1760. The existing disease had been going on from 1835 to 1847, and quite enough was seen and known to enable them to deal with things as they are. They wanted to understand the disease. They did not want to be told what pleuro-pneumonia was; they knew it was a disease of the lungs, but they wanted to know what produced it. Again, what was sore mouth? whence did it arise? and how could it be checked or stopped? These were the questions which they were interested in discussing, and if possible, solving. The truth was, they had been looking for that which they could not find,—a remedy applicable at all times and under all circumstances. He had never yet seen two animals affected alike; and, if he might speak of treatment, he had never given the same dose to two animals placed side by side. One question which presented itself was, whether contagion was capable of being given to an animal in health. It was not a question merely between an animal susceptible of disease and another not so. To illustrate the nature of susceptibility, he would observe that half-a-dozen men might be put into damp beds on the same night: one would have rheumatism, another gout, another fever, and so on. What was done simply brought out the idiosyncrasy of the system. It was found in practice that an animal in a state of susceptibility, if brought into contact with another animal on which the disease was in an advanced stage, would suffer from the contact. We were strangely at war about the word “contagion:” he felt satisfied that a great many of the symptoms connected with the breaking out of disease in animals were the result

of vitiated, and therefore injurious, food. They knew that disease existed in apples and potatoes to a fearful extent; and in all seeds they found occasionally a want of vital energy. Animals were often prone to disease by inheritance, receiving in the process of formation a condition which rendered it susceptible to attack. Take the case of scour in lambs. As regarded that disease, the treatment was applied in the wrong direction. Properly, medical treatment should be applied rather to the dam than to the young.

Mr. Aitchison remarked upon the carelessness of farmers in breeding from animals without knowing the state of their constitution. He felt convinced that most diseases amongst sheep, cattle, and horses, arose from their own negligence; they did not take sufficient care to have a healthy sire and a healthy dam to produce that which would afterwards re-produce (hear, hear). They must in future attend more to this point, and to the general susceptibility to disease (hear, hear).

The *Chairman* said, that, as they had exceeded the usual time allowed for discussion, he must now make a few closing remarks. He had listened with considerable pleasure to the interesting and able address of their friend *Mr. Cherry*; and he felt that he would be expressing the sentiments of all present when, in due time, he should move a vote of thanks to that gentleman (Cheers). *Mr. Cherry* had stated that many animals caught the disease from consuming food which was not in a healthy state. Such being the case, the question naturally arose, whether the public itself might not be receiving injury from the consumption of that which was sent up to Smithfield and Leadenhall market to be sold, perhaps, at an inferior price. This matter was certainly well worthy of the due consideration of Government, and he hoped that their attention would be given to it.

Mr. Cherry said that the speech just delivered by the chairman fully sustained the conclusions at which he (*Mr. Cherry*) had arrived on that subject. He had not intended to assert broadly that the disease was not contagious. He had only intended to qualify the word *contagion*, being satisfied that the disease was much less the effect purely of contagion than was generally supposed. There was great confusion of ideas produced by the use of the words "contagion" and "infection," as if they were synonymous. "Contagion" came from the Latin root *con*, and *tingo*, to touch with; whereas "infection" signified floating on the water or in the air. They all knew that the miasma of marshy ground produced disease simply from infection, floating, as it did, in the air; but that was very different from diseases produced by the act of touching. They ought carefully to observe this distinction, and to remember that what was often spoken of as the rule was in reality an excep-

tion. He believed that he could point out the causes of the existing epidemic, and that means whereby it might be exceedingly mitigated rested with themselves; but for the present he must forbear. The subject of generation was especially important. In the year 1841 he pointed out the consequences which must inevitably result from breeding with infected animals, and what he then foretold has since come to pass. He had never seen a type of disease in one animal which he had not afterwards found in another. The principle was in universal operation.

A vote of thanks was then given to Mr. Cherry, and briefly acknowledged by that gentleman, which terminated the meeting.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of October 6, 1847.

QUARTERLY MEETING.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, ROBINSON, SILVESTER (St. Albans), GODWIN (Birmingham), CHERRY, sen., JAMES TURNER, C. SPOONER (Professor), PEECH (V. P.), ERNES, HENDERSON, GOODWIN, PERCIVALL, MAYER, sen., and FIELD.

The minutes having been read,

Professor Spooner rose, and proceeded to complain of certain passages that appeared in the Report of the Proceedings of the Council as published in *THE VETERINARIAN*; to that part which related to the remarks of Mr. Peech, on an interview which he had had with the Professor or Professors at the Royal Veterinary College. Of this statement he (Professor Spooner) loudly complained, and declared it to be utterly false, in so far as he was concerned.

Mr. Peech replied to these remarks. He said that Professor Spooner had written to him, requiring an explanation, which he immediately furnished. The statement in *THE VETERINARIAN* was substantially correct; that he had not mentioned the name of any party, but that he had done so in his reply to Professor Spooner, and should now repeat it. The conversation, the result of which he had communicated to the Council on a former occasion, and the report of which had led to this discussion, had occurred between himself and Professor Sewell.

Professor Spooner, after this manly and candid reply from Mr. Peech, said a good deal, but which appeared to mean that the reporter should exonerate him from the charge; and, finally, he

appealed to Mr. Percivall, as the published Editor of the Journal, to undertake to see this justice (?) done him.

Mr. Percivall stated that he, as Editor, could not pledge himself to do any thing of the kind individually, neither ought he to be asked for such a pledge; but that he would see that the statement as given by Mr. Peech in explanation should be properly reported.

Professor Spooner still kept dwelling on the topic, and uttering complaints of being maligned; and the usual string of irrelevant complaints against the ill usage he had experienced at the hands of the Council followed, and would have produced the usual discord, but

Mr. Ernes said, that as the Council did not recognise any published report or any journal, they could not be answerable for any thing that appeared; but that every member was entitled to give any report that he might deem proper, and that the Council was not the place to enter into such discussions.

Mr. Arthur Cherry protested against the making the Council an arena for the display of private grievances or personal complaints.

Mr. W. Goodwin seconded these views.

The President stopped the farther prosecution of the subject, and the minutes were then confirmed.

The Treasurer laid before the Council the accounts for the last half year, by which it appeared that, after all current expenses, there remained a balance of £190 odd in his hands.

Messrs. Mayer and Goodwin moved and seconded that the Treasurer's report be adopted. Carried.

Mr. Arthur Cherry moved, and *Mr. Ernes* seconded, that the sum of £100 be applied to the further liquidation of the Loan. Carried.

A Letter from the President to the Right Hon. Sir George Grey, applying for a Copy of the Petition for a New Charter, then lying at the Home Office for consideration; the reply to that letter, accompanying the copy of Petition, and the said Petition, were then severally read. In the latter allusions were found to be made to the heads of a Charter submitted to the Home Office; and after a short discussion it was moved by *Mr. Gabriel*, and seconded by *Mr. Field*, that the President be requested to apply to the Home Office for a copy of the same. Carried.

Mr. Gabriel then rose, as he stated, with much pleasure to propose a vote of thanks to a member of the portion of the Board of Examiners acting for Scotland, Dr. M'Gregor; and he added, that he was the more induced to do so, because, from filling the same appointment to the portion of the Board acting for England as Dr. M'Gregor did in that acting for Scotland, namely, being Secretary

thereto, he had more opportunities of judging of the onerous and important duties he had undertaken, and the disinterested and efficient manner in which he had carried them out. He should, therefore, propose "That the thanks of the Council be given to Dr. M'Gregor for his valuable and efficient services as Secretary to the portion of the Board acting for Scotland." This was seconded by *Mr. Percivall*, most warmly responded to by all present, and carried unanimously.

Adjourned.

MISCELLANEA.

THE "BESETTING SIN" OF RIDERS ON HORSEBACK.

"WHEN you wish to turn to the right, pull the right rein: this is common sense. The common error is precisely the reverse;—when you wish to turn to the right to pass the hand to the right. By this, the right rein is slackened, and the left rein is tightened, across the horse's neck; and the horse is required to turn to the right, when the left rein is pulled."—"The military style (of riding) is, and must essentially be, a *one-handed* style, for the soldier must have his right hand at liberty for his weapons. His left hand thus becomes his bridle-hand; and that hand must hold the reins in such a manner as will require the least possible aid from the sword-hand to shorten them, as occasion may require. This is with the fourth finger from the thumb only between them."—"I do not see how this system can be altered unless it be by placing three fingers of the left hand between the reins, viz. the second, third, and fourth. The reins held in this way are as easily and as quickly shortened, by drawing them with the right hand through the left, as if they were separated by the fourth finger only. I always adopt this mode myself."—"When double bridles are used, the riders should ride with only one rein at a time; and they should use both hands to the reins, whether of the curb or snaffle, precisely the same as a rough-rider or colt-breaker uses the reins of a snaffle-bridle; except that the reins should pass *outside* the fourth finger from the thumb, instead of between them and the third fingers."

"Correct, single-handed indications, with the fourth finger only between the reins, will not be obeyed by one horse in ten thousand. Try them in driving: then the terret pad prevents their being given incorrectly, and a bearing rein, a severe bit, and a whip,

give you every advantage in keeping your horse collected. You will find them wholly inefficient. The soldier who is compelled to turn to the right, by the word of command, when the correct indication is unanswered, in despair throws his hand to the right. The consequence is, that no horse is a good soldier's horse until he has been trained to turn on the wrong rein."

"Without the same excuse for it, the same may be said of all ladies, and all civilians, who ride with one hand only, and of almost all who ride with two hands. For, strange to say, in turning, both hands are generally passed to the right or left. I have known many of what may be called the most perfect *straight-forward* hands—that is, men who on the turf would hold the most difficult three-year-old to the steady stroke of a two-mile course, and place him as a winner to half-a-length; who in the hunting field would ride the hottest or the most phlegmatic made hunter, with equal skill, through all difficulties of ground, and over every species of fence, with admirable precision and equality of hand; or who on exercise ground would place his broken-charger on his haunches, and make him walk four miles an hour, canter six and a half, trot eight and a half, and gallop eleven, without being out in either pace a second time; but who have *marred all by the besetting sin of side-feeling*—of turning the horse on the wrong rein. The consequence is that *they can ride nothing but what has not been trained to answer wrong indications.*"

Hints on Horsemanship.

BITTING HORSES.

To give the bit its most powerful action, it should be placed so low as only just to clear the tusks in a horse's mouth, and to be one inch above the corner tooth in a mare's mouth. The curb chain should be so tight as not to admit of more than one finger between it and the chin. These rules are simple, and should be attended to by all riders, ladies as well as gentlemen, for no groom knows (cares?) how to bit a horse; and a horseman should no more mount with his bit improperly placed, than a seaman set sail with his rudder out of order.—*Hints on Horsemanship.*

INFECTION AMONG SHEEP.

To remove all fear that may have arisen in the public mind in consequence of the recent case of diseased sheep, said to be foreign, introduced into the market, as to the chance of similar importa-

tions, the revenue authorities have given instructions to their officers to carefully examine all cattle and sheep which may be hereafter imported; and in the event of their appearing to be infected with any disorder, not to permit them to be landed without inspection as to their soundness by some competent person, which, we may observe, will be a very useful regulation, not only in consequence of the daily increasing numbers imported, but from the fact of the prevalence of a disorder among sheep in several parts of the continent.—*John Bull*, Oct. 9th.

SEVERAL VALUABLE HORSES POISONED.

A VERY serious loss has befallen Mr. Charles Bloodworth, farmer, of Empingham. On Saturday, the 2d instant, his team, consisting of seven good cart-horses, together with a valuable horse borrowed of his neighbour, Mr. Exton, after having completed their day's labour, were fed by Mr. Bloodworth's farming servant, who, being desirous of giving the animals a little extra corn, apportioned out to each of them a quantity of oats which he knew to be in a bag. They had not long partaken of it, when all of them shewed singular symptoms of illness, and before the evening had expired one of them died. On the following day two more died, and on Monday two others, making five. The remaining three are still suffering, and it is feared there is but little chance of their recovery. It turned out, after inquiry, that the oats given them were the remains of some which had been prepared with a mixture of arsenic for seed, which system is adopted by some farmers for the purpose of destroying crows. Mr. Bloodworth's loss, we hear, may already be estimated at upwards of a hundred pounds.—*Lincoln Chronicle*.

HORSE-FLESH BANQUET.

ABOUT 160 persons sat down lately to a horse-flesh dinner, at the Adler Hotel, at Bornheim. The dinner was ordered by the Frankfort "Society for the Protection of Animals" (*Rum Schutze der Thiere*). We are enabled to state, that horse-flesh affords a very palatable dish. The dinner was enlivened by many toasts and songs.—*Frankfurter Journal*, Oct. 9th.

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LAMENESS IN HORSES.

By WILLIAM PERCIVALL, *M.R.C.S. and V.S.*

[Continued from p. 608.]

NEUROTOMY.

NEUROTOMY—compounded of two Greek words, viz. *τεμνω* *to cut*, and *νευρον* *a nerve*—was at the suggestion of that warm-hearted and revered friend of the veterinary profession, the late Dr. Geo. Pearson, introduced by me, in my “Lectures,” in the year 1823, as an appropriate appellation for what commonly went by the name of “unnerving,” and sometimes by that of “nerving:” phrases which, besides being untechnical, were neither of them definite or distinctive enough in their meaning for professional use.

DEFINITION. Neurotomy, as the operation is now understood, may be defined to be, the division of a nervous cord, and the subsequent excision of a portion of it, with the view of removing pain through the destruction of feeling. The *plantar nerves* are those commonly operated on; but any nervous cord of the body may, if occasion called for it, become the subject of neurotomy.

THE PURPOSE FOR WHICH NEUROTOMY IS PERFORMED is, usually, the removal of lameness; though the operation may have, and has had, other objects. And the lameness the most certainly and the most effectually removed by it, is foot-lameness, and especially of a navicularthritic description: hence the reason of the account of neurotomy being here annexed to that of navicularthrititis.

THE INTRODUCTION OF NEUROTOMY INTO VETERINARY MEDICINE is comparatively of modern date. For years before, the

division of nerves had been practised by human surgeons, in particular for the relief of that most painful of all painful affections, *tic doloureux*; but there is no mention of any application of the operation in veterinary surgery prior to the time of Moorcroft; nor was it until Professor Sewell had announced himself as, and was acknowledged to be, THE DISCOVERER OF NEUROTOMY FOR THE REMOVAL OF LAMENESS, that Moorcroft, who had left England for India, came forward and advanced his claims to that honour; which he did in March 1819, in a letter "To the Editor of the Calcutta Journal," as follows:—

"Sir,—With reference to your paper of the 23d inst., noticing as discovered by Mr. Sewell, within about the last eighteen months, a cure for a lameness in horses, commonly called 'coffin-joint lameness,' I beg to observe, that the mode of treatment alluded to, so far from being a discovery of the last eighteen months, *was practised by me about eighteen years ago!*"

"Finding that diminished supply of blood (by tying both the inner and outer artery of the fetlock) did not counteract the mischievous effects of pressure on the inflamed tendon, I turned my thoughts towards subduing its increased sensibility by diminishing the proportion of nerve naturally distributed on the foot. On this principle I raised the *outer* nerve of the fetlock joint out of its bed with a bent probe, and cut it across with a pair of scissors. This was done in several instances, and always with immediate and decided lessening of lameness; frequently, indeed, the animal when he rose from the bed appearing perfectly sound. But the result was not uniformly and permanently successful, relapse of lameness occasionally taking place after a period of soundness for some weeks, and as often at grass as at work."—In an operation of the kind Mr. Moorcroft performed on a horse, the property of Lord G. H. Cavendish, in a struggle the animal made at the moment the nerve was divided, it broke its back. At first, Mr. Moorcroft confined himself to the division of one (the outer) plantar nerve: afterwards, however, he bethought himself, that, "if it should happen that the division of *both* nerves should completely remove the pain, and exercise restore the original facility and latitude of motion to the joint, and that by degrees the sensibility should be reproduced, so far as might be necessary for the complete performance of all the functions of the foot and limb, a new and rich field would be opened to physiological research. It was resolved, therefore, to divide both nerves, in a case of relapse of great lameness in a mare. The animal on rising from the bed trotted boldly and without lameness, but now and then stumbled with the foot operated on. The wound healed in a few days, and the mare was put to grass." She progressed favourably for some weeks, but

happening to cut her foot severely in galloping over some glass bottles, such severe injury accrued to "the joint" (the coffin) that her case became hopeless. Mr. Moorcroft winds up this interesting account of neurotomy with the following very sensible practical deductions:—

"From the preceding experiments it has been shewn, that, by the diminution of the quantity of blood passing to the inflamed joint, the sensibility was not subdued, owing to adverse peculiarity of structure; that by the diminution of sensibility the repairing powers of the part were not injured, as far as they depended upon the action of the bloodvessels; that by a very sudden division of one nerve a fatal accident was produced; and that by the extinction of sensibility, the natural guard against external injury, through the division of both nerves, an accident was rendered destructive, which in the usual condition of the foot might have been less injurious. The unfortunate results of surgical practice, candidly related, rank in utility of record next to those of opposite termination—errors in practice guiding experience to sound conclusions.

"I recollect not the number of horses operated on by me successfully, though it was somewhat considerable. Some of these were worked by myself, and the general impressions on my mind at this interval are, that horses so operated on, when they did not again become lame, were more apt to stumble with the limb operated on than the other; and this mode of treatment was likely to be more usefully applicable to coach-horses than to horses intended for single harness or for the saddle*."

These observations shut out all doubt or surmise, not only that the operation of neurotomy had been practised, but practised successfully by Mr. Moorcroft, before he departed for India, which was in the year 1808; at the same time that they afford us reason for believing, that the same talented and skilful veterinarian was on the brink of bringing forth what has since been brought to light through the experiments of Mr. Sewell, viz. the utility of neurotomy as a remedy for the removal of lameness in cases where medicine is confessedly powerless, together with the serviceability of neurotomized horses, not for driving only, but for riding, and even for hunting. It appears, however, from this account, that Moorcroft did not continue long enough in England to perfect that which he had so promisingly commenced; and that, after he had left, neurotomy had died away in repute, or rather had never been made public until it was proclaimed to the veterinary world by Professor Sewell; and therefore to that gentleman is equitably

* The entire paper from which these extracts are made will be found in THE VETERINARIAN, vol. iii, p. 619, *et seq.*

awarded the honour of being the originator or introducer of a practice which has saved numbers of horses from premature slaughter; and while it has spared them days of unceasing pain, has restored a very great majority of them, at least for a definite time, on account of their serviceability, to the keeping and favour of their masters.

THE RATIONALE OF NEUROTOMY is plain and simple. Lameness is the manifestation of pain. Deprive the part in pain of its sense of feeling, and the pain, with the lameness consequent on it, ceases; not to return until sensation shall return, and not *necessarily* even then. Neurotomy, therefore, as a remedy, differs from all other remedies, insomuch as the relief afforded by it is *instantaneous*: divide the nervous cord going to the seat of lameness, so as to cut off all communication between the part in pain and the sensorium, and comparing nervous action to what it in some respects so nearly resembles, the same effect is produced as when the wire of communication is cut proceeding from some electrical machine or battery. Electricity, like nervous action, is at an end; the electric battery is charged in vain; the brain can no longer take cognizance of impressions or injuries inflicted on the neurotomed part. Suppose the seat of lameness to be the foot, the *plantar nerve*, being the trunk whence that organ derives its nervous branches, is the nervous cord to be cut to deprive the foot of sensibility: but there are *two* plantar nerves as trunks, one on either side of the pastern, and the division of but one of them will paralyze but the half of the foot of the same side; consequently, to render both sides of the foot insensible to pain and lameness, both plantar nerves must be divided. This done, a horse may be cut, or stabbed, or struck any where below the division of the nervous trunks—or at least below where any branches are given off from the superior division of the nerve—with perfect impunity; the dealer's common test of a neurotomed foot being to prick the coronet with a pin: should the horse not flinch or catch up his leg, he is set down as “a nerved one.”

The reason is now plain why a horse, dead lame even before he be cast for the operation, becomes, from the moment neurotomy has been performed, quite sound. No change whatever has been effected on the disease which caused his lameness; nothing, in fact, in or about the foot or limb has been altered, save that the communicating sensitive cord has been cut in two, and sensitive action has in consequence ceased. Although, however, such alone appears as the *immediate* result of the operation, we find it was asked by Moorcroft, as indeed it naturally would by an inquiring mind, if there were no

REMOTE EFFECTS FROM NEUROTOMY to be looked for—

whether the nutritive and secretory functions of the foot, deprived of nervous power, would proceed as before ; and, further, what difference neurotomy might make in the animal's action or tread upon the ground. Moorcroft had observed that, under the loss of nervous energy, " the repairing powers of the part were not injured, so far as they depended upon the action of the bloodvessels ;" and subsequent experience has confirmed this observation. Inflammation appears to be the same process in a senseless as it is in a sensitive foot, and the secretion of horn goes on as well in one as in the other ; the grand and important difference between the two being, that, supposing the neurotomized foot to receive a prick or bruise, and inflammation and suppuration to follow, matter may collect and burrow underneath the sole or frog, or other part, and the horse, incapable of feeling any hurt in his foot, can of course give no intimation of mischief, by shewing pain or lameness, to his groom or master ; and consequently, unless the latter should detect the evil himself, suppuration may proceed to that extent to cause the hoof to separate and be cast off the foot : a catastrophe which has happened more than once, and one that has been brought forward as a fearful argument against the practice of neurotomy. A neurotomized horse may receive a stab in being shod from a nail taking a wrong direction, or he may pick up a nail on the road, and no intimation whatever of injury be given, unless it happen by his farrier or groom to be discovered. Such accidents, however, are not of every-day occurrence, neither are they, in the hands of expert farriers and careful grooms, likely to happen without their knowledge, and therefore have no right to be regarded in the light of arguments against neurotomy further than that such hazard, remote though it be, tends to the diminution of such a horse's value in the market.

- The operation of neurotomy has certainly taught us important uses of nerves to the foot. By imparting sensation to the organ they become at once its safeguards in health and (if I may be allowed the expression) its nurses in disease : they inform the animal when his foot is hurt, and they warn him, through the pain he feels, that the injury, or the inflammation the consequence of it, will be aggravated by pressure upon it or use of it ; and therefore it is that he " favours" the ailing foot in action, and " points" with it while at rest, and so in effect *lays it up*. This the neurotomized horse, feeling no pain, finds no occasion for doing ; and the result may, through inattention, possibly be such as I have before stated, viz. suppuration of the entire foot, shedding of the hoof, and even, from subsequent irritation in other parts, in the end, death itself.

But there is another use of nerve in the foot which neurotomy has thrown strong light upon, and that is, *the horse's sense of feeling through his hoofs*.

DOES THE NEUROTOMIZED HORSE MAINTAIN THE SAME STEP AND TREAD HE USED BEFORE? To this important question I unhesitatingly answer, no!—he does not. There can be no doubt but that the horse *feels* the ground upon which he is treading, and that he regulates his action in consonance with such feeling, so as to render his step the least jarring and fatiguing to himself, and therefore the easiest and pleasantest to his rider. The tread of the hoof creates a certain impression—depending on the nature of the ground trodden upon, and the force and manner with which the tread is made—on the nerves (of sensation) of the foot; which nerves being associated above the knee, in their course to the sensorium, with motor nervous fibres, the motions excited by the latter will necessarily be more or less influenced, through the will, by the impressions they receive from the former. Such impressions being, in the neurotomed subject, so far as regards the feeling of the foot, altogether wanting, a bold fearless projection of the limb in action will be the result, followed by a putting down of the hoof flat upon the ground, such as is not pleasant in the normal state of the foot. And these combined alterations in action and mode of setting down the feet it is which give rise to the peculiarity in the gait of the neurotomed horse—consisting in lack of elasticity and consequent jarring movement—by which he is ever, when *both* fore feet have been operated on, distinguished by a rider experienced in such matters from other horses, as well as characterised in action and gait from what he formerly was himself.

This acknowledged defect has been adduced, and not without reason, as another argument against neurotomy. It must be remembered, however, that the foot for which such an operation has been performed was originally a lame one; and that, if we have restored it to soundness at some expense to its organization, still have we placed the animal thereby in a preferable condition to what he, as lame and useless, was in before; and therefore the argument holds good only to a certain extent. It certainly would have been doing much better for the lame horse had we made him sound without detracting in anywise from the remaining perfections of the foot: since, however, such was incompatible with the nature of the remedy, we ought in reason to be content with what has been achieved by neurotomy, and that this has amounted to no mean benefit I shall annex a few cases to shew; accompanying them with the remark, that I feel quite convinced, when the subjects for the operation shall have been properly selected, and the

fitting time chosen for its performance, similar results may be sanguinely and pretty surely anticipated.

THE SUCCESS OF NEUROTOMY is best shewn by cases:—The late Mr. Castley, V.S. to the 12th Lancers, whose name in the early numbers of THE VETERINARIAN stands in no ordinary estimation as a man of sound, penetrating, practical observation, has put two cases on record of great value to us in this place.

Case 1.—October 1, 1819, a bay gelding, belonging to his regiment, the 12th Lancers, fell suddenly lame of the near fore leg on the road between Hounslow Barracks and Hampton Court. Nothing was discovered to account for the lameness, either in the leg or foot. He was immediately placed under treatment, bled in the foot, physicked, &c., but all to no purpose. At the expiration of a month, although he stood in the stable as firmly upon one foot as upon the other, yet, when put in motion, “he was as lame almost as if his leg was broken.” The *shoulder* was now imagined to be in fault, and under such a supposition was tended; but with no better success than when the foot was treated. On the 10th of January following, it was determined to try the effect of *nerving* (neurotomy). The horse arose after the operation, “and trotted sound. In a month he was in the ranks, and he remained in the regiment upwards of *eight years* afterwards, during which time he continued quite sound, although he was sometimes put to very considerable exertion.” In 1828 the horse was “cast and sold” at Lisbon, the regiment being at the time in Portugal; not, however, on account of lameness, but for old age, and even then “he fetched £20.”

Case 2 of Mr. Castley's is one in which *both* fore feet were successfully operated upon. A brown gelding, a troop horse, had been observed frequently to stand pointing or resting the fore feet, and particularly the off foot. For two years, however, after first observing this, he had not been reported “lame;” nor did he become absolutely so until the hot summer of 1826, when, after a severe ride on despatch duty, he went very lame in the off fore leg, for which (on the 14th June) treatment was commenced, such as bloodletting from the foot, blistering the coronet, purging, &c. and this produced great relief. Exercise, however, brought back the lameness. The latter end of August, the lameness being regarded as “chronic,” and Mr. Castley's conviction being that it was “navicular lameness,” neurotomy was determined on, and on the 1st of September was put in practice. As in the last case, the horse arose from the operation, “and went sound.” The consequence was he escaped being “cast” for sale, and was chosen as “one of the effective for the expedition to Portugal.” He carried his rider all the time the regiment remained abroad, and returned, and was at

the time Mr. C. wrote out his case (December 1829) present, doing his duty, with the regiment*.

I shall next relate a case that occurred to Mr. Rickman, a name likewise associated with the practical worth of the early Numbers of *THE VETERINARIAN*, which is remarkable on account of the extraordinary feats the horse, after being neurotomized in *both* fore feet, was enabled to perform, as well as for the extraordinary increase of value the operation conferred upon him. It is as follows:—

Case 3.—A beautiful chestnut horse, six years old, for which his owner (a farmer) had refused a hundred guineas, though he possessed “good circular hoofs,” became a little lame in both fore feet, but more so in the near than the off. A farrier who attended him pared his soles, and blistered his coronets, and finally fired him from hoofs to knees; after which he was turned out, but came up, six months afterwards, worse than when he went out. Mr. Hilding, a friend of Mr. Rickman’s, related the case to him, and consulted on the policy of purchase of the horse for the purpose of neurotomy. Mr. R.’s advice was to do so. Accordingly the lame horse was bought for £12 for Mr. Rickman to neurotomize. The operation was performed on both legs below the fetlock joints. The horse was rendered by it, immediately, “quite sound.” His new master, Mr. Hilding, who is a very superior horseman, rode him, afterwards, two seasons with the Shropshire hounds, and whenever they had a long run he was always in the front. He was offered 200 guineas for the horse, providing he would give a warranty, which however he could not, of course, do. Subsequently, the horse was sold for 60 guineas to Mr. Gittins, who rode him for two years with Sir Richard Puleston’s hounds. He had then been operated upon four years, and still continued sound. “He was considered one of the most brilliant leapers that was ever put at a fence†.”

Mr. THOMAS TURNER, the present energetic and respected President of the Royal College of Veterinary Surgeons, some years ago possessed a horse on which he performed the operation of neurotomy, and which he afterwards rode hunting for two seasons, with as much confidence, I have heard him say, as though he had never been the subject either of lameness or of neurotomy.

A CASE OF MY OWN shall conclude this summary of the eminent success that has attended neurotomy in proper hands, under favourable circumstances. In June 1837, a captain of the regiment in which I have the honour at present to serve, made me a

* These two cases will be found in ample detail in the second volume of *THE VETERINARIAN*, pp. 493-5.

† *VETERINARIAN*, vol. iii, pp. 42-3.

present of a horse which, setting his lameness aside, bore a high name and value. His pedigree was—"got by Whisker out of Castrella," and consequently he was "own brother to Memnon," who had run second for the gold cup at Ascot. Indeed, it was this affair which led Chifney, then the owner of Memnon, to depart in haste from the course to purchase the subject of the present narrative at the extraordinary price of £1400; though, as soon as he discovered his fresh purchase had no run in him, he was glad to sell him for a charger at the reduced value of £200. At the time he came into my possession the horse was dead lame, and incurably so, in the near fore foot, from navicularthrititis; for which, although he had been treated at several separate periods, and as often relieved, yet, so invariably did the lameness on work return, that he would now, but for my intercession, have been destroyed. July 1837, his lame foot was operated on. He arose, and immediately went perfectly sound, and for two years after, in my possession, continued so; the use I made of him being a hack about town. His former master also rode him after the operation, and declared him to be as perfect in his action and performances as he had ever been in his palmy days. What I continually remarked myself in riding him was, that, being much in the habit of changing his legs in cantering, he would quite as often lead off with the *near* foot (the one he had been so long and painfully lame upon) as with its fellow.

CASE OF GASTRITIS, PERITONITIS, AND INFLAMED JUGULAR VEINS.

By JOHN TOMBS, V.S., *Stratford-on-Avon.*

Oct. 1st, 1847, I WAS requested to attend a grey cart colt, 3 years old, belonging to a gentleman four miles hence. At 6 P.M. I saw him, and was informed he had been taken ill in the morning, about 9 A.M., when at plough. According to the waggoner's account he ate his breakfast well, but of that there are considerable doubts. He lay down in the team, and was taken home immediately, and bled profusely; had ol. terebinth. and tinc. opii given him; and the dose had been repeated, as well as the venesection, previous to my seeing him. The symptoms manifest to me were—cringing, lying down, rolling on his back, which position he would maintain for a few minutes; then getting up and looking back at his side, with a peculiar dejected countenance: all

the time blowing highly. The most characteristic symptom, that indicative of gastritis, is incessant eructation, the stench of the gas escaping being intolerable. The pulse is 98, and strong. He has had no evacuation within the last hour, though several during the day, scanty however in quantity. After bleeding to syncope, I gave opiates, combined with mild stimulants; also enemas. At 8 P.M. lies down and rolls upon his back in great pain. Gave ol. lin. 1 pint; bled largely again; and cauterized the abdomen with a fire shovel, and a large piece of iron commonly called a coulter. At 10 P.M. pulse 96, symptoms generally much the same. Give ol. lin. one pint every three hours. At midnight symptoms urgent; bled again, and repeated cauterization.

2d, 8 A.M.—No amendment. Pulse 96, and full, although at times it is soft and wavering—lies down and rolls on his back occasionally—eructations less frequent: the mucous membranes most easily examined are highly injected—legs and ears warm. Bled moderately. and continued oil internally, as before, and enemas. At 2 P.M. pulse varying from 90 to 96, and sometimes bounding. It is a strange pulse; it is so weak and quick one minute, that dissolution might be hourly expected; the next minute so, that the grim monster Death would seem to be hours distant. As the case appears hopeless, and there is a bounding pulse alternately with an oppressed one, I tried the lancet once more; and before I had abstracted two quarts of blood the poor animal fairly reeled, and nearly fell down. At 4 P.M. no evacuation, and no cessation of pain. Gave hyd. sub. and aloes, combined with opium. At 10 P.M. pulse 100, and weak—eructations less forcible and frequent—lies down and looks back—has eaten nothing. Give gruel, and stimulate the abdomen over the cauterized parts (which are very sore) with ol. communis and ol. terebinth.

My opinion at the beginning was that the stomach was the seat of disease; that it contained ingesta, and was being irritated and paralyzed by some obnoxious agent; seeing he had been fed with chaff, bean meal, and good hay in the stable, and on grass when turned out in the field at night. Another symptom I observed strongly corroborative of a gastric affection was, that, when the animal lay down, he would stretch out his fore legs, and so endeavour to press the epigastric region against the ground.

3d, 8 A.M.—Pulse 86—looks back—cringes—and lies down in great pain. As he has taken nearly a gallon of ol. lin. without evacuation, gave a bottle of ol. ricini, with gruel and enemas. From A.M. to 4 P.M. has voided several lots of fæces of a natural consistence, mixed with hawthorn stones and sticks. Gave one pint ol. ricini. At 8 P.M., purges freely; urinates often, the urine being strongly impregnated with the terebinth. he took on

the first day. He does not eructate so often, though when he does there is still an offensive smell. The abdomen is very much swollen where the actual cautery was applied. Give linseed tea, gruel, and gentian.

4th.—Pulse 105, and weak—purges excessively—no appetite—would drink cold water if permitted—experiences a violent twinge at times, and immediately looks back, and lies down, but does not roll. Has burst out bleeding from both jugulars in the places where he was bled. To suppress the hæmorrhage it was necessary to insert sutures through the incisions in the skin. Prescribed vegetable tonics in combination with astringents—bandaged 'extremities.

5th.—Pulse ranging from 84 to 100—a cessation of pain—stands the principal part of the time—breathes quick, and stands with his fore legs wide apart, similar to a horse with inflamed lungs—drinks gruel in large quantities.

6th.—Pulse 86 and weak—looks excessively pulled down, and tucked up in the flanks—walks round the box, and then lies down, but does not roll upon his back—drinks large quantities of starch gruel and linseed tea. In a few seconds after drinking, liquid fæces are discharged, which emit an intolerable stench. Eats a few mouthfuls of hay : eructation has entirely ceased—eyes dejected—both jugulars inflamed, and distended downwards. As the pulse is lower, and the symptoms generally more favourable, a slight glimmering of hope may be cherished that there is a remote chance of his ultimate recovery. The cuticle is desquamating where the cautery has been applied. Apply a lotion of the chloride of lime to the tumours on the neck, after a linseed poultice, giving astringents and vegetable tonics.

7th.—Pulse 88—bowels more regular—respiration much embarrassed—kidneys irritable—voids his urine often. Give linseed tea to soothe the kidneys. The neck is alarmingly inflamed, with a discharge of fœtid matter from the orifices of both jugulars, and sloughing has taken place all around them. Apply a solution of the chloride of lime, and afterwards poultices, to the sores and swelling.

8th.—Pulse 96—purges very much from the effects of the linseed tea : the jugular veins are enormously swollen, and in a state of congestion, the swelling of the veins and surrounding parts extending to the breast. Give astringents, and poultice the neck. He drinks large quantities of thick gruel.

9th.—Pulse 96. Countenance indicates internal agony ; it has not had a lively appearance from the beginning : rests his nose on the manger—breath short and quick, similar to the respiration in

pleurisy—eats no food, but drinks gruel voraciously. Fæces soft indeed they cannot be otherwise, since no solids are taken—legs and ears warm—the jugular veins engorged—the cellular tissue on each side of the neck in a gangrenous state, and a discharge of highly offensive matter from the punctures in the veins. All hopes of his recovery relinquished. Treatment as before.

10th.—Pulse 116—reduced to a skeleton—great prostration of strength—staggers when he moves—a great craving for gruel—the neck in a terrible state, being completely putrescent, and sloughing has taken place, leaving large openings around, into the veins; the submaxillary and facial, quite plugged up with congested blood, are four times their natural size: looks back—eructations are come on again, the disengaged gas being truly sickening—fæces soft. Give gentian and gruel—neck treated as before.

11th.—Pulse 105—great prostration of strength—does not eructate to-day—refuses food, but drinks gruel as greedily as ever—breathing quick. It is quite distressing to see him; he is the picture of a very sick horse, and has the appearance of one emaciated from a three months' disease, the hideous tyrant fast approaching. He had the greatest difficulty to walk from one box to another: he was removed into a pure one, as the first stank insupportably.

12th.—Died.

Post-mortem appearances, ten hours after death.—Subcutaneous cellular tissue on both sides of the neck mortified, as well as the adjoining muscles—jugular veins, from the orifices downwards, extending to the breast, gangrenous and engorged with congested blood, resembling squeezed cheese curd tinged pink colour. The coats of both veins were considerably thickened; the upper divisions of the jugulars, and the submaxillary and facial veins, distended with black coagulated blood. A deep-seated abscess discovered underneath the origin of the semi-membranous and tendinous muscles contiguous to the tuberosity of the ischium. This however had no reference to the disease, but was connected with suppressed strangles, some months before. On cutting open the cavity of the abdomen, the intestines, generally, presented a healthy aspect, with the exception of the inner lining of the cæcum, which was inflamed: they contained liquids only. The peritoneum on both sides of the abdomen inflamed, thickened, and firmly adherent to its walls. Cortical parts of kidneys a little discoloured—liver healthy—spleen and omentum inflamed, the latter particularly so, and firmly adherent to the stomach. Bladder empty and healthy—stomach quite empty, and part of its peritoneal

coat inflamed; the vessels of the villous coat in a state of congestion. Blood oozed out of the minute extremities of some of the bloodvessels, which could readily be wiped off. The muscular coat of the œsophagus very much thickened for several inches from the stomach, but mostly so at its termination and around the cardiac orifice: this arose from the repeated eructations. Lungs healthy—the right side of the heart filled with “white coagulated blood,” and the left with black treacly blood. The stomach not having been analyzed, positive proof is wanting as to the actual cause of death; but I am firmly of opinion that gastritis was not produced by the food he had been eating. The symptoms when living, and appearances after death, lead to the confirmation of what I stated to the proprietor at the onset of the affection,—viz. that the animal was diseased through the agency of some pernicious ingredient in the stomach, but how it came there, is at present a mystery. A singular feature in this affair was, the complete obliteration and mortification of both jugular veins, which probably would alone have caused death, and that extending downwards. It is true the veins were not opened afresh every time blood-letting was resorted to, and that the neck was corded, but not more so than in many cases I have known that did well afterwards, in which irritation was set up in both veins. The incisions not uniting, and hæmorrhage taking place at an unusually short space of time after venesection, is another important fact in the case, which should not be lost sight of in a pathological point of view, since two questions arise out of it; first, was the turbid consistence of the blood, with a disposition to coagulate in the veins (since, undoubtedly, the exciting cause of inflammation in the veins was *coagula* in the incisions), caused by the vastly accelerated action of the heart and arteries, the blood being thereby hurried through the lungs, and in consequence not properly purified?—secondly, were the chemical properties of the blood altered by any thing poisonous being swallowed? In conclusion, I may remark, that the venous system is exceedingly liable to congestion, and especially after vegetable poisons have found their way into the stomach.

P.S.—I have a case or two to record respecting some dogs which died lately under suspicious circumstances of poisoning. Some thought they were rabid; others, that they died from distemper.

CASES OF ABORTION IN A COW, OF DIFFICULT PARTURITION IN A BITCH, AND IN A SOW.

By Mr. JOHN NELSON, Highfield, Sheffield.

CASE I, *July* 1847, I was called in to attend a cow, seven years old, belonging to Mr. Isaac Bradley, Park-side, Stannington. On inquiry I was informed that, about a week ago, the cow evinced symptoms of abortion, by frequent straining and discharge of bloody matter from the womb. She was within four months of her full period of utero-gestation. When I arrived I found her standing with her back up, and straining very much, shewing evident signs of acute labour-pains; at the same time, there was no appearance of the placenta, and but slight discharge. I proceeded to examine the uterus, but it was with the greatest difficulty I could introduce three fingers into the os uteri; notwithstanding I was informed that the hand of a man had been introduced the day before, and that then there could be felt much abrasion of the parts, which had since under the circumstances contracted.

I informed Mr. B. that he had allowed the proper time for extracting the fœtus to pass by, which was when the cow shewed the first symptoms of abortion; and that therefore there remained no chance now, but to give a little medicine, and leave her to Nature. I therefore left a few doses of aperient combined with fever and carminative medicine, to be given once per day in gruel; directing that the cow be kept comfortable, and that she might be allowed to run in the field when the weather would permit, and to let me know if she did not go on right.

Nov. 13th.—Mr. B. informed me the cow gradually recovered after I saw her. For some time she discharged much from the womb, but he could not see any of the bones of the fœtus amongst it. In about eight weeks she came into use, took the bull, and now, as he believes, she is in calf.

CASE II. *Sept. 5, 1847.*—Mr. Bennet, South-street, Sheffield, brought to me a small bitch of the springer breed. On inquiry, I was informed that the bitch had, on the previous day, shewed symptoms of pupping, and that, since, she had been very uneasy, and was now much exhausted and weak. Accordingly, I examined the vagina, but could introduce no more than my forefinger, she being so diminutive—but nine inches high. I found the fore extremities of a dead pup in the vagina, but could feel no head. I concluded that it must be turned over upon its side, there being no room to bring away the fœtus, but by piecemeal; I therefore applied my parturition forceps for small animals to one of the extremities, and twisted it off at its base; the other I served

the same. I then applied the forceps to the sternum, and brought it away also. I next applied them to the dorsal vertebræ, and brought about half an inch of the spine away. Having now cut through the solid parts of the body, I concluded that the head of the fœtus would fall beyond the posterior parts, and so be easily extracted. Accordingly, I applied the forceps to the posterior parts of the vertebræ, taking care not to inclose the skin, to give length for the head to fall back; by which plan the fœtus was extracted, the head coming last, supported by the skin of the back. I next introduced my finger into the vagina, and felt another pup, which proved to be alive, though I could touch nothing but its nose. I applied the forceps to the lower lip, and extracted it alive. A third I extracted by the lower jaw, also alive. I did not give any medicine, but merely ordered that she be kept comfortable. On the 7th inst. I called to see my patient, and found her perfectly recovered; but one of the pups had died.

CASE III.—*Oct. 18, 1847*, I was called to attend a sow belonging to Mr. Wm. Smith, innkeeper, Heely. On inquiry, I was informed by Mr. S. that on the 17th, at 9 P.M., the sow commenced farrowing, but, after farrowing four pigs, she sickened, and appeared very uneasy, and continued getting worse, until the present time.

Symptoms.—Much swollen in the abdomen, and apparently in great pain. I informed Mr. S. that I doubted the sow had only partly farrowed, and that the pigs to come would very likely be dead. “Well!” said he, “I do not care, providing the sow can be saved.” I therefore proceeded to examine the uterus, but could not introduce my hand fully through the pelvis; yet I could distinctly feel the nose of a fœtus at my fingers’ ends. I drew out my hand, and introduced my parturition forceps for pigs and sheep, and applied them to the lower jaw; whereby, in a few minutes, it was extracted. By this process, five pigs were extracted, some by the feet, others by the lower jaw. Two of them lived, and did well; the other three were dead. I left a little aperient combined with fever medicine, to be given several times a-day in gruel.

19th.—Much improved, and the young ones doing well.

21st.—She now begins to feed well, and to become convalescent.

THE EXPEDIENCY OF TESTING PERSONS AS TO THEIR QUALIFICATIONS FOR BECOMING STUDENTS OF VETERINARY MEDICINE.

By a "FRIEND TO THE ART."

To the Editor of "The Veterinarian."

Sir,—BEING a person anxious for the welfare and improvement of the veterinary profession (deeming it not the least useful in the community), I take the liberty of intruding on your time by soliciting a place in your valuable Periodical for the few following lines, the subject of which must appear to all interested in the above art to be a sad oversight in the government of the Veterinary College. The matter to which I allude is, the easy admission of pupils to that establishment without any test being applied to prove their previous knowledge. When we look back, and reflect on the change that has been effected in the profession within these last fifty years, we would say "*nil desperandum*;" but, though science has been rapid in this department in endeavours to liberate the veterinary art from the dark cloud which too long enveloped it, much yet remains to be done to advance it to that position which it ought long ago to have occupied. We speak but the truth when we say, that but recently has the profession been appreciated so as to bear any analogy to the esteem in which the liberal professions are held. Now, though we may not want to attribute this altogether to the subject before us, yet we would say it has had much to do in retarding the general respectability and usefulness of the profession. Let us inquire into the following questions:—"Is the veterinary art a scientific or a literary one, or one for which a liberal education is necessary?" In answer to which we say, "Most assuredly it is!" "Is the majority of those who practise that art liberally educated, scientific, or literary men?" To which we answer, "Most assuredly, No!" "Can they, without all or some of the above qualifications, fill those stations which members of the sister profession do, and to which they would possess nearly an equal claim?"—"Can their society be courted by literary or scientific men?" or, if it were, "Could they feel comfortable in such company?" The answers are obviously, "No! unless conversant with literary topics." It may be said that we are going too far when we talk about literary and scientific qualifications; but, of course, we do not mean to apply these terms in their full acceptation. It is a rare thing to find such men in bodies; but

that for which we contend is, that a general obligation should be levied on those entering college to possess certain acquirements, similar to those which are required of those entering the medical or other learned professions; and that it is equally necessary, I think, is obvious to all, and yet the want of such still remains. Surely men merely conversant with their daily avocations are but ill fit to associate with any save those who are conditioned as themselves. I know they may be very interesting companions for the jockey, the public-house frequenter, *et hoc omne genus*; but is it to this that the properly educated veterinary surgeon aspires? We should anticipate not: and wherefore is it so?—It is because a good education tends to refine the habits of the man, although there are many exceptions: yet, that it is one of the means to produce the above end, we are convinced; therefore why neglect it? The tendency of such an alteration would be, not to diminish numbers entering the profession, but in our mind the contrary effect would be produced. Our gentry would then equally bring up their sons to the veterinary profession as to any of the liberal ones; but there is a current opinion abroad—and when we say so we speak from experience—that a young man the more he is of a sporting or gambling character, the fitter is he to become a veterinary surgeon.

Now, if such be the case, can any wonder that so many members of the profession do not hold prominent places in society? It appears to me, that the duties of the regular practitioner are not sufficiently circumscribed or select. Many would deem a veterinary surgeon incompetent to practise his art were he not a perfect adept at administering balls, shoeing, &c.; while, in reality, these come not within his province, although, of course, more or less, he should be able to direct the farrier. What we understand the duty of the veterinary surgeon to be, as the term implies, is the medical treatment of animals. Why then not adhere to that. Let them not be mere mechanical agents; bodies, as it were, without minds. Surely, I fear we might apply to several what Sallust has to many: "*Sed multi mortales dediti ventri atque somno indocti incultique vitam secuti peregrinantes transeire quibus profecto contra naturam corpus voluptati anima oneri fuit. Eorum ego vitam mortem que juxta æstumo quoniam de utrâque siletur.*" Let, then, the experiment be made of appointing an examination previously to the college entrance; and we shall be much surprised if the respectability and usefulness of the profession be not increased. But now let us briefly attempt further to prove if such would not be its tendency; and, as it were, to turn to the bright side of the question. We rejoice to say that there are and have been many in the profession happy enough to be exceptions to the general rule; men who by their talent and learning would

have done honour to any station; who, unawed by the difficulties by which they were beset, came forward to contend with these difficulties, and nobly surmounted many; and this their writings, &c. testify.

To whom, then, is due what has been done but to these men here alluded to? But, can a few men of learning, here and there, accomplish that which in a body they might? To whom do we look to realise our future hopes in the profession but to those who are now entering it? Then, is it not to be desired that something be done to aid in realising these hopes, let the instrument be ever so feeble? We grant that numerous are the evils which have been rooted out; but we should bear in mind this useful maxim, "never eradicate an evil without planting a virtue in its stead." The time ought to be nearly arrived when the veterinary profession should be viewed as one that had acquired strength, that those who nurtured it in its infancy might now take their rest, as it were, transmitting the care of it to their junior brethren. Everything must have a beginning, "*Arbor virga fuit.*" The veterinary profession has had its beginning, or rather its regeneration, and that we may say within this century: it has had its difficulties, and those numerous ones: some have been overcome, some remain to be overcome. It is, Sir, then with the hope that this subject may be taken up by those in whom the power rests as one grand object that would tend to lessen these difficulties and enhance the value of the profession, that has induced me to trespass (I fear too long) on your time: the only excuse I can offer is, that I am what I subscribe myself,

A DEVOTED FRIEND TO THE VETERINARY ART.

SINGULAR MORBID CONDITION OF THE PLEXUS CHOROIDES.

Dear Sir,—ALONG with this you will find enclosed a diseased specimen, which I have procured from the brain of an old pony. The mass appears to consist of cartilaginous granules, which are all embedded in the substance of the plexus choroides. The specimen I send you is a longitudinal section of one-half of the mass, from the left ventricle. More particulars I will send you soon.

Your's, truly,

W. HAYCOCK.

Huddersfield, 13 Nov. 1847.

* * * Many thanks for the specimen. The particulars of so rare and curious a case will be looked for with interest by the
ED. VET.

HORSE-FLESH USED FOR HUMAN FOOD.

To the Editor of "The Veterinarian."

Dear Sir,—SEEING among the "Miscellanea" of your last number an account of a "Horse-flesh Banquet," I venture to send you the following curious extract from the "Manuel d'Hygiène" of J. M. Briand:—

"Horse-flesh, although not used for food in Europe at the present time (except in cases of great scarcity of other provision) was formerly in great demand as an article of consumption, until the use of it was interdicted by Pope Boniface the Third. The motives of this interdiction do not appear; but notwithstanding the bull of the Roman pontiff, horse-flesh is publicly sold in the butchers' shops at Copenhagen; and, to prevent the flesh of diseased horses being sold, the animals are previously examined by a veterinary surgeon, and a mark put on their hoofs, which are to be left attached to the quarters, as a guide for purchasers. Horse-flesh is rather hard, but of good flavour, very nutritious, and equally as wholesome as that of the ox."

The same author farther remarks, in respect to donkeys,

"The toughness of the ass has passed into a proverb. This, no doubt, has been much exaggerated. Ass-flesh was not disdained by our forefathers, particularly that of the young animals. Plinius informs us that with Mecenius it was a favourite and choice dish. According to Legrand d'Aussey, the Chancellor Duprat fattened asses on purpose for his table."

WM. ERNES.

Dockhead, Nov. 18, 1847.

ETHER SUPERSEDED.

(From the Edinburgh Mercury.)

ETHER inhalation, which promised to impart such an invaluable aid to surgical science, had not been in use for twelve months, when another and far more effective anaesthetic agent was discovered, for which we are indebted to Professor Simpson, viz. chloroform, or the perchloride of formyle. The composition of chloro-

form was first accurately ascertained by Dumas, the celebrated French chymist, in 1835, but Souberain and Liebig had previously been engaged in similar investigations, and so far with success. These inquiries, however, were solely directed with a view to the extension of the chymical science. "They had (observed Professor Simpson) no idea that the substance to which they called the attention of their chymical brethren could or would be turned to any practical purpose, or that it possessed any physiological or therapeutic effects upon the animal economy." To Professor Simpson, therefore, belongs the honour of discovering its wonderful anaesthetic properties, and of having first ventured to apply it to the relief of suffering humanity. Its advantages over ether are so varied and palpable that the latter may be considered as already superseded. "It is a dense, limpid, colourless liquid, readily evaporating, and possessing an agreeable, fragrant, fruit-like odour, and a saccharine, pleasant taste." As an inhaled and anaesthetic agent, it possesses over sulphuric ether the following advantages:—1st. A much less quantity will produce the same effect. 2d. A more rapid, complete, and generally more persistent action, with less preliminary excitement and tendency to exhilaration and talking. 3d. The inhalation is far more agreeable and pleasant than that of ether. 4th. As a smaller quantity is used, the application is less expensive, which becomes an important consideration if brought into general use. 5th. Its perfume is not unpleasant, but the reverse, and more evanescent. 6th and 7th. No particular instrument or inhaler is necessary; it is quite portable; and all that is required is to diffuse a little of the liquid upon a hollow-shaped sponge, or even the pocket-handkerchief, and apply the same over the mouth and nostrils, so as to be fully inhaled. Professor Simpson has since his discovery applied it frequently to obstetric practice, and with entire success; but it has last week been applied for the first time by Professor Miller and Dr. Duncan to surgical operations. A great concourse of medical men and students witnessed the result in the Royal Infirmary; Professor Dumas, of Paris, to whom we have already referred, also being present.

I have to day employed the new anaesthetic agent, introduced by Professor Simpson, as a substitute for ether in surgical operations, with the most perfect success. The first case was that of a young lady, fourteen years of age, who inhaled the chloroform

from a handkerchief. In two minutes she was insensible, when I extracted two teeth; in three minutes she recovered consciousness, and left my surgery perfectly well. The second was a gentleman, twenty-seven years of age, who inhaled from a piece of sponge containing 100 drops of chloroform. In three minutes insensibility was produced; a tooth was then extracted, and he recovered in four minutes. The third case was that of a young lady who required three teeth and four stumps extracted. She became insensible in four minutes by inhaling the vapour from a handkerchief: as in the first case, the teeth and stumps were removed, and she recovered in seven minutes after the operation. The great superiority of this new agent over ether is, that less is required to produce insensibility, it is more rapid in its effects, unconsciousness does not continue so long after the operation, the flavour is more agreeable to the patient, and leaves no unpleasant odour after inhalation, neither is that debility felt so often experienced after inhaling ether.

I remain, Sir,

Your obedient servant,

JAMES ROBINSON.

7, Gower-street, Bedford-square,
November 19th, 1847.

Nov. 19th.—An unusually large meeting of medical men and students took place in the operative theatre of King's College Hospital, to witness three severe surgical operations performed by Professor Fergusson, while under the influence of the new preparation. The chloroform was administered by Mr. Robinson, dentist, who had been furnished with this compound by Mr. Hooper, the eminent chemist of Pall Mall. The results attending the inhalation of this preparation were most complete, and satisfactory to all present. One of the cases was, for *melanosis*, the removal of the eye from the socket altogether. Another was *fistula lachrymalis*, a very painful operation of the eye. The third was a case of *hydrocele*, in which iodine was injected.

REVIEW.

Quid sit pulchrum, quid turpe, quid utile, quid non.—HON.

ILLUSTRATIONS OF INSTINCT, DEDUCED FROM THE HABITS OF BRITISH ANIMALS. By *Jonathan Couch, F.L.S.*, &c. Van Voorst, London, 8vo, pp. 343.

ALLOWING that the proper study of mankind in general is man, the veterinary part of the creation will not probably be accused of impertinence in assuming that their proper study is brute or beast kind; nor will veterinarians themselves experience any other feeling but one of pride and satisfaction in being called from the study of the body of the brute to the investigation of his *mind*: for, that mind, in the sense of intellect or reason, he possesses, is no longer matter of dispute among those who have watched animal nature the closest, and given the subject, in all its bearings and relations, their best consideration. The Gordian knot which fastens reason to instinct, and which the philosophers of old, without giving themselves the trouble to untie, cut at once in two, by declaring that instinct was the faculty or property of the brute, and reason of man, it has been Mr. Couch's business in the work before us to untwist, fold by fold; in the course of which complex task not only has he set these abstruse subjects in novel lights, but he has disencumbered them of much collateral matter of fact which clung to them, and concealed from view their veritable natures. Mr. Couch, through his "Illustrations," has literally *dissected* the animal property of instinct. He has shewn that the simplest forms of animal existence are destitute of any such property; he has caught its dawning in the ascending scale of animal orgasm; he has found the instincts multiplying in animal bodies as tissues and organs increased in them; he has demonstrated instincts in the fullest number in the lord of the creation himself. Altogether, we can assure our readers it is many a day since we have, on this much debated subject, "instinct," found ourselves at once edified and entertained to the degree we have been by Mr. Couch's sensible observations; and what has rendered our pleasure the greater is, that his "Illustrations" have, for the most part, been drawn from animals of our own country.

"To acquire an accurate idea of the intrinsic nature of the faculty termed Instinct, it will be requisite, first, to notice the conditions of living existence below it in the scale of nature; in order

that; by tracing the successive manifestations of the increasing faculties, we may understand the precise station which this faculty occupies in the ascending scale, and the means through which its operations are developed. We shall thus be taught that it is not so much an insulated faculty, of which the tissues and organs are no more than instruments, as an accumulation of powers combined together, and occupying a step in the course of a transition from the lowest to a higher condition of natural rank; so that its variation or degree is due to the modification of these inferior powers which together form its constituent parts."

In accordance with this plan of procedure, our author commences his synthetic examination into the nature of instinct by mentioning some of those endosmotic beings whose simple and sole design appears to be,

"—— to draw nutrition, propagate, and rot;"

and then, taking one step up, passes on to a class in possession of organic sensibility or irritability, but still without instinctive feelings; "although it may happen that sympathetic and reflex motions may put on the appearance of something that resembles them."

"There are no living beings in which this faculty of irritability or excitability exists alone; but there are families in which no other addition besides this is made to the principle that first came under our consideration. Creatures thus constituted possess the power of making selections of food, and of varying their functions according to extraneous circumstances or internal changes; but it is only among the highest of these natural classes that any one can be said to display a preference. And in some even of these it is still simply through the influence of a reaction (such as by Dr. Marshall Hall has been termed a reflex action of the nerves) that any thing bearing resemblance to a bias of the will can be discerned."

"The next stage of our inquiry will bring us to a still higher class; where we shall find not only the existence of wants, but consciousness of such a deficiency as the idea of a want implies: from which we shall be able to discern a rising impulse prompting to the search for a supply, as well to satisfy the craving of desire, as to palliate the pain of deficiency, or defend against danger. It is in this condition that an approach is made to the border of that which is properly understood by the term Instinct; and here, therefore, we shall do well to pause, and consider the complication of circumstances included in that function or character."

"The most complicated and most highly endowed of creatures are only constituted such by the addition of new tissues, or the modifications of those already existing, with their attending

properties, to those possessed by the lowest order in creation. Man himself—who is beyond doubt the highest creature in the visible world—a genus in himself, and rightly defined by Linnæus in the expressive signification of that high point of wisdom,—a capacity for self-knowledge,—is constituted by the plenitude of the natural properties which distinguish beings whose whole existence is confined to the possession of a mere tissue; as well as of those in the ascending series, whose lives are comprised in the separate additions of sensibility and irritability.”

“The conclusion, then, is this:—that the essential difference by which one kind of animal is distinguished from another, and in which therefore its specific identity consists, is constituted by the peculiarity of tissue in its various organs, and the preponderance or complications of such tissue in its whole structure; but more especially by the peculiarity of its nervous fabric, and the arrangement of what is called its nervous system.”

“In the course of this work it will be our business to trace the effects of the developments we have spoken of, as displayed in the familiar actions of animals; and chiefly in those with which we are best acquainted, either from their inhabiting our own country, or from the narratives of naturalists who have studied the creatures of distant lands in their native haunts.”——“And our first instances will be of such actions as vary with the age of the individual, or with the season, before we proceed to those which are distinctive of the species: as by so doing we may obtain proof, that changes in the force or manifestation of instinct proceed from no other cause than fluctuations in the state of the animal body itself.”

“In some cases the active development of an instinct becomes periodic and revives again after a more or less definite period of suspension. This is remarkable in some well-known series of phenomena in the economy of birds, which have long excited admiration. One of these is the disposition to the formation of the nest, of which we shall have to speak hereafter. For the present, no reference is made to the skill employed in its structure, situation, or adaptation to use, but only to the formative impulse; which in some instances is so strong, that, when the nest is formed, instead of waiting until the egg is ready to be deposited, the building bird proceeds in the construction of others, until, at last, the further duty of using it for its peculiar object puts an end to its labours. This practice is particularly observed in the common wren (*sylvia troglodytes*); and it has been supposed that the true reason why this diminutive architect builds more than one nest is, that it has become dissatisfied with the former edifice or with its situation. But this

supposition is incorrect, since it is known that, in a more advanced period of the season, when this particular instinctive propensity is declining, the pair will return to the forsaken nest, and employ it as originally intended."

"An animal feels the want of food through an instinctive impression principally arising from the state of the stomach; and the complicated sensation thence arising, a mixture of the impression of pleasure and pain, impels it to exertion for obtaining a supply, of which the nature and taste are ascertained with little inquiry. But there are other sensations of the stomach still more painful, and for which there is a relief in nature, but towards which there appears to be no propulsive tendency: so widely different is the instinct arising from a natural want and a morbid action. Nor is there any exception to this among wild animals, as has been supposed, where the feeling arises from a derangement of any organ besides the stomach. A sick animal will, it is true, find out a plant that is not its usual food, and devour it; but this occurs only when the disorder is confined to the stomach. There is no instinctive craving in derangements of other organs; and, in its nature, this of the organ of digestion can only be compared to that similar feeling in man, which leads him to drink freely in a fever, or to accommodate a weak or irregular stomach by fanciful craving for food."

"The organs of taste and smell, from causes hitherto unknown, are gratified with different odours and impressions in different creatures; and therefore we need not feel surprised if, in beings so differently organized, the objects sought after to satisfy the craving of hunger should greatly differ. And as, among men, one individual prefers the salt and another the sour, so we may observe in one pasture the sheep nibbling the short grass, the cow preferring the long and coarse, the horse searching out the fine and tender, and the ass passing the whole of these by, to shew its preference for the sprouts of furze. It is from a similar variation of taste that the tiger seeks for blood, and the bear for roots and honey,—the fox for birds, the weasel for eggs; until, at last, we find that there is not a substance in the animal or vegetable world that is not the selected food of some creature,—a source of supply and happiness to some sentient being. And even the most filthy and loathsome things are a delectable treat to some of the creeping families, which, by devouring the putrid matter, play their part in purifying creation from what would annoy others, and, perhaps, generate disease and death."

"It is by an instinct common to all wild animals that the hare and rabbit, the cat, fox, rat, and mole, endeavour to escape from their enemies; but it is a modification of this action arising from

the nature of the object which each of them dreads, and the powers which each of them is conscious of possessing, which makes the variation in the expression of that by which each gives prominence to what is distinctive of the race. The rabbit runs to the hole from which it has not ventured far, conscious of its want of power for distant or continued flight; whilst, trusting to superior fleetness, the hare wanders to a greater distance, and seeks no safety but outrunning its pursuers. The cat runs up a tree, not, however, by leaping, but by extending its claws and fixing them in its bark; and there, as if aware that the enemy cannot follow, it remains under a slight shelter of concealment, at no great elevation above its foe. In a house, when desirous of escaping detection or injury, it does no more than creep into an unsuspected corner, and trust to obscurity and patience for the result. When roused, the extended claws display a consciousness of another resource, which none but creatures of the feline race are capable of exercising."

"This consciousness in individuals of the powers by which their race is characterised is deeply stamped upon their actions, in a manner to modify the existence of the creature, so as often to bear exclusively the name of instinct. It is even seen in cases where, from the influence of domestication, the instruments that rendered the manifestation formidable have disappeared. The absence of horns in the cow does not prevent it thrusting at an adversary with its head."

"An apprehension of danger, operating on great timidity, is the principal cause why some creatures are incapable of being rendered tame; and this untameableness is produced by fear exciting such a degree of confusion in its perceptions as hinders the creature from understanding the nature and intention of those kind actions which are shewn towards it when an endeavour is made to conciliate its regard. When, therefore, we discover in an animal a natural inaptitude to receive such impressions of conciliation, it may be concluded that there is, in addition to an overwhelming fear, a deficiency in the capacity of the understanding. For though the truth of the Brahmin's answer to Alexander the Great may be admitted, that the wisest creature is that which keeps at the greatest distance from man, yet when compelled to endure his presence, it is a higher degree of wisdom to accept his friendship than to provoke his enmity. A mixture of understanding, therefore, with timidity will lead to a perception and appreciation of the signs that are manifested in its favour; and by compliance with them, enable it to secure the attachment of the object of its fears. And even where a state of liberty is maintained, a degree of understanding united with timidity leads to the existence of the valuable quality of cautiousness, which is the surest principle of safety;

whereas the absence of the nobler qualification of intelligence produces such distraction as will prevent a creature from using, even where life depends on it, the ordinary powers of which it is possessed. Habits illustrative of this have been observed in individuals of the common hare. If, on being first roused, it rushes off with headlong haste, it will assuredly be taken by a dog; but if the creature be seen to stop, and erect its ears, as if listening to its pursuer, its escape may be regarded as exceedingly probable. The effect of terror on the same animal is witnessed when it is pursued by the cry of a company of weasels. Their speed is greatly inferior to that of the hare; but such is the influence of the terror infused into it by an instinctive consciousness of the insidious and cruel nature of the enemy, that these ravenous creatures rarely have the trouble of a long pursuit. Instances are common in which a hare, after escaping to a considerable distance from the reach of its pursuer, has altered its course, and returned to the very seat of the peril; and if followed after with great clamour, with any very loud and unusual noise, it is sure to be thus overtaken."

"I have known a horse which no soothing was able to conciliate—no kind treatment render any other than what is denominated vicious, with the habit of doing everything but that which it was wanted to do. This spirit was at last subdued by fixing on its back a terrifying object, which its utmost efforts were not able to shake off: but when the conquest was accomplished, not a single worthy quality remained."

"The consideration, that excessive timidity is the chief obstacle to the taming of many creatures, enables us to discern the proper conduct to be pursued in seeking this desirable object. The process must be conducted by shewing the creature that its dread is groundless; that the supposed enemy may in truth be a friend; and while the outbreak of passion or fear is shewn to be useless, or is rendered harmless, the needless trepidation is soothed, and not irritated. Much coolness and patience are requisite for the performance of this task; and especially when the creature is subject to inequality of temper, or possesses great power to injure; but when accomplished in this manner it is lasting."

Cicero, even, was an advocate for the community of instinctive actions in man and animals:—"In the first place," he says, "it is a gift from nature to every kind of animal, that it should consult the preservation of itself, both in its life and limbs; and consequently that it should avoid every thing which seems hurtful. And further, that it should obtain and prepare for food whatever is necessary to subsistence, as well for itself as its offspring. The desire of union for the sake of offspring, and the care of them when

obtained, is felt by every kind of creature. . . . But there is this great difference between mankind and the beast,—that the latter, as it is moved by the impression of sense, applies itself to present things, and little regards what is past or future. But man, who is possessed of reason, through which he discovers what is meet, perceives the causes, course, and remote connections of events, compares things that resemble each other, and brings together and connects the future with the present.”

“If this were the sole difference between man and the brute, it would at the best be only in degree, and not in kind. In proof of the law of human nature by which man is compelled to observe and obey instinctive impulses, it will not be necessary for us to enter upon a minute survey of the various circumstances of his existence, in his passage from youth to age; for in attempting this we should bring ourselves under the necessity of constantly endeavouring to separate and define the phenomena which have their source in one, from those which must be admitted to spring from another and higher origin.”

“In preference, then, I will select a period of his life when he has not acquired habits of any sort; when no instruction can have been received, when no opportunity has been offered of profiting by imitation—a principle so powerful in the education even of brutes; when, in fact, the only stimulus to which he has been subjected is that of the air, which has first excited the action of breathing, and has then entered the lungs to produce its specific effects on the blood. At this, the earliest stage in the life of an infant, the sensation of hunger is the only want it has ever felt, or has been able to display. The manner in which this craving of nature is manifested is eminently characteristic of an instinctive faculty; and it is the more illustrative in this instance, since it is both appropriate to its present circumstances, and different from those which are equally appropriate to a more advanced stage of its life. No precept has instructed the little stranger that the mouth, rather than the eye or ear, is the entrance to that channel through which nourishment ought to be received; or that this food is furnished by an apparatus of one form rather than another; and yet, even if a finger be brought into contact with its cheek, the mouth is instantly directed to the object, and it pursues it in various directions, as the impression first made is removed to another spot. And when at last the lips are permitted to be closed on the supposed source of enjoyment, the action is not that of chewing—which is the instinctive propensity, under similar circumstances, of the being from whom the infant has derived its existence—but of sucking, which is the only one that for the present can be made available to the object in view.”

“The propensity to playful gambolling is another of these unconscious impulses, and is as much a proceeding of instinct in the child as the kitten. How earnestly it is followed, in either instance, is an amusing portion of its nature; and few can have failed to notice the eagerness with which the kitten will run round and round after its tail, and snarl, and endeavour to bite it, when disappointed in the attempt to secure it in its grasp. The changes in disposition which are brought about by the modification of organization through the progress of years are not less conspicuous in the careful grimalkin that has laid aside her gambols, and now directs her attention to the important object of adding a captured mouse to her larder—of feasting on a caged canary, or a coveted morsel from the delicacies of the parlour; in the sober ass luxuriating on a thistle, undisturbed by the intrusion of a tyrant master; than in the miser, who has left the top and ball which amuse ‘children of a larger growth,’ to dote upon his pelf; or the sensualist, who has changed the sports of the field and flood for the idlest of amusements in a crowded city. Many of even our most refined gratifications have their foundation in this instinctive feeling; and while in their sanctity they are recommended by reason, they are compelled to find their permanent support in the humble but energetic principle of Instinct.”

Mr. Couch next proceeds to demonstrate that some of the “lower instincts” even are united with reason.

“Among the lowest, in point of excellency, of the emanations of Instinct, is the sensation of hunger, and the craving for food—an impulse common to all sensitive creatures, whereby they are instigated to the exertion of a variety of faculties, which partake alike of the nature of instinct and reflection.”

“And the mode of securing this object is in each race and species skilfully varied to suit the necessity of their case. If the proceeding be less elaborate in the more limited intellect, it is not the less appropriate to the nature of the creature to be supplied. It is no small effort of skill in the farmer to fit the cultivation of his crop to the course of the seasons and the nature of the soil. He employs instruments of complex structure in the preparation of the ground, and supplies it with manures compounded and varied with chemical skill. His method of proceeding is changed according as it is a rainy or a dry season; and, finally, if he employs his knowledge of mechanism in reducing his corn to food, we refer the whole proceeding to the exercise of reason: he has acted from a comparison of a variety of known causes with their anticipated consequences.

“But although they do not possess, as they do not need, a mill to grind or an oven to bake their food, we know that a storehouse is constructed by the rat, mouse, squirrel, polecat, and among fo-

reign animals, the hamster ; and bushels of corn, potatoes, apples, and nuts have been stored carefully away, as if in the persuasion that, however plentiful the present supply might be, it was wise not to trust to the continuance of such abundance, but to provide for all future contingencies. The conveyance of a large quantity of corn must be the work of time, with the combination of many individuals ; and there are not a few instances narrated, in which the work done must have been as well devised as the associated perseverance of man in executing any important and difficult enterprise. The appetite also must have been suspended, with no small degree of self-denial, during the progress of the undertaking."

"A gentleman was engaged in the amusement of coursing, when a hare, closely pressed, passed under a gate, while the dogs followed by leaping over it. The delay caused to her pursuers by this manœuvre seems to have taught a sudden and useful lesson to the persecuted creature : for, as soon as the dogs had cleared the gate and overtaken her, she doubled and returned under the gate as before, the dogs again following and passing over it. And this flirtation continued backwards and forwards until the dogs were fairly tired of the amusement : when the hare, taking advantage of their fatigue, quietly stole away. (*Loudon's Mag. Nat. Hist.*, vol. iv, p. 143)."

"I have purposely avoided drawing any illustrations of intellect from the history of the dog ; because, however sagacious many of its actions are, an objection might be raised, that its proceedings are influenced by the long-continued habit of receiving instruction from man. This animal also has been the subject of separate volumes of anecdotes, to which it is here sufficient to make a general reference ; and I will therefore content myself with the following traits of character,—in the first of which the dog shews itself a nobler creature than the man. "The hero of the story figures in Captain Southey's History (of the West Indies) with great propriety among the conquerors of Puerto Rico ; for, though only a dog, the full pay of a crossbowman and half as much more was received by his owner for his services ; and he was thought to have done as much toward what is called the pacification of that island as a third of all the Spaniards who were employed in it. Bezerillo was his name :—of a reddish colour, with a black face, not large of his kind, nor finely made, but of great understanding and courage ; and, indeed, what he did was such that, *sans* doubt, the Christians believed God had sent him for their succour. He would select among two hundred Indians one who had escaped from the Christians, or who should have been pointed out to him, and would seize him by the arm, and make him come back with him to the camp, or wherever the Christians might be ; and if he

attempted to resist, or would not come, he tore him to pieces, and did other things which were very remarkable, and worthy of admiration. At midnight, if a prisoner got loose, and were a league distant, it was but to say 'the Indian is gone!' or 'Fetch him!' and away Bezerillo went upon the scent, and brought him back. The tame Indians he knew as well as a man could know them, and never did them hurt; and among many tame ones, he could distinguish one wild one. It seemed as if he had the judgment and intelligence of a man, and that not of a foolish one. Salazar had one day taken an old Indian woman, among other prisoners, after a defeat of the natives, and for no assigned or assignable reason, but in mere wantonness of cruelty, he determined to set this dog upon the poor wretch. But it was to be made a sport of, a spectacle for the Spaniards, or the Christians, as their contemporary historian and fellow-Christian calls them, even while he is relating this story. Salazar gave the woman an old letter, and told her to go with it to the Governor at Aymaco. The poor creature went her way joyfully, expecting to be set a liberty when she had performed her errand. The intent was merely to get her away from the rest, that the dog might have a fair field, and the beholders a full sight. Accordingly, when she had proceeded little farther than a stone's throw, Bezerillo was set at her. Hearing him come, the woman threw herself on the ground; and her simple faith in Salazar's intention and in the animal's sagacity, saved her: for she held out the letter to the dog, and said 'O, sir dog, sir dog! I am carrying a letter to the Lord Governor: don't hurt me, sir dog!' The dog seemed to understand her; and did understand her, in fact, sufficiently to know that she did not look upon herself as a condemned person, and that she implored his mercy; and he came up to her gently, and did her no harm."

"In the spring of the year 1845 a mastiff-dog in Cornwall, having discovered that the roof of his master's house was in flames, ran in-doors, howling dismally, and, pulling at the garments of the inmates, urged their retreat from the building; and, hurrying out of the house, howled again, and directed their attention by his looks to the flaming roof.

"No animal is capable of enduring so much change, and of manifesting still such variety of instinct, as the dog; and it is this which has made it the most completely domesticated of creatures. But place it once more where the attaching influences of domestication are at an end, and its old good habits are exchanged for new and bad ones, which shew the civilized condition to have operated on such parts of its character as we should have thought little likely to be affected. Even the barking of a dog is a language learned in domestication. A really wild dog does not bark,

but howl; and in countries where the dog returns to a savage, he forgets to bark, and learns again to howl. It is remarkable, too, and will perhaps explain why barking should ever have become the natural language of a dog, that the wild sounds of some of the kindred species, as the wolf, fox, and jackal, resemble the dog's in its domesticated state."

Coming to the concluding chapter of this interesting work, we find it commencing with the following well-merited encomium on the fore-knowledge of that great luminary of medicine, John Hunter.

"In the earliest stages of science the importance of anatomy to the successful practice of medicine and surgery must have been evident; but it was not till the laws of physiology had become a severe study, that a knowledge of the structure and development of the lower animals was found to be essential to a right understanding of their economy. The importance of this inquiry was first appreciated in our times by the illustrious John Hunter, a man so much in advance of the attainments of the age in which he lived, that his advocacy of this study subjected him to the sneers of men whose names are now remembered only as by-words of reproach and shame."

"Examples have already been given to shew, what indeed is obvious to daily observation, that the instincts, feelings, thoughts, and aspirations of men and animals vary according to the conditions of youth and age, and to other constantly occurring and recurring influences; and as the events of life necessarily increase our knowledge, and make up what is commonly called our experience, the usual mode of accounting for the changes to which all habits are liable is by referring them to these influences. This may be correct in part, but it is not universally so; and even where its operation is unquestionable, there is still another principle at work, to which experience itself is indebted for the wisdom it attains. This is the intimate dependance of the bias or impulse of the mind, and its capacity for intricate inquiry and clear conclusion, upon the condition, and especially upon the firmness, of the mental organ."

"It may help us to an understanding of that obscure and disputed subject—the primary intention of the creation of animals—to suppose that they were made to manifest certain conditions of *being*, which should be strictly temporal, without aspirations after or capacity for intellectual improvement, and the dread of future evil. It is a condition plainly unprepared to enter into and enjoy a higher state; and by this want of moral responsibility animals are saved from falling lower than they are. The limit to the degradation of the brute is the line strongly drawn by Nature, beyond which it cannot pass—that a violation of instinct will be

productive of pain, from which its nature turns away. The degradation of a brute can never be so low as moral guilt and baseness can reduce the pride of man; and this the degraded man too surely feels is the additional bitterness in the cup which *he* must drain whom sensuality has degraded."

"It is in correspondence with these principles of a partial development of the higher prerogatives of mental excellency, that we discern in animal actions methods of proceeding which it is hard not to regard as of a moral or intellectual character, but which, on investigation, seem to be merely politic. We witness among birds the execution of justice on such culprits as offend against the principles and regulations of their community. The rook offers a familiar example of this in refusing to build its nest in privacy, or anywhere but in the neighbourhood of some dignified mansion; and as the nests of this bird require repair in spring, it often happens that the new materials are not to be obtained near at hand, and they are compelled to search for twigs at a distance, or else to break them off nearer home while in a growing condition, which is a work of much labour. To the younger members of the community, not learned in the laws of *meum* and *tuum*, this is an irksome task; and they are not long in coming to the conclusion that much trouble may be saved by watching their opportunity, and helping themselves from the growing structures of older builders around them in their absence, little imagining, we dare say, that their proprietors will detect the loss of here one, and there another, of the twigs inserted in the walls of their edifices. The discovering that they have been robbed is, indeed, no small proof of observation and reasoning: for the actual carrying off of their goods is never or but rarely seen by the owners, as the rogues take care not to be caught in the fact; and we know that an egg may be taken away, and the parent bird be none the wiser. Birds are more alive to the least change in the external look of the nest than to the eggs within. But the rascals among rooks have little calculated on the power of observation of their older neighbours, and how well they, from experience, can compare the work done, and compute the time it ought to have taken if they had worked honestly and found their own materials. The wrong-doers being discovered, the punishment is appropriate to the offence: by the destruction of their dishonest work they are taught that they who build must find their own bricks or sticks, not their neighbours; and that if they wish to live in the enjoyment of the advantages of the social condition, they must endeavour to conform their actions to the principles of the rookery of which they have been made members.

It is not known what enormities led to the institution of another

tribunal of same kind called the Crow Court; but, according to Dr. Edmonson, in his View of the Shetlands Islands, its proceedings are as authoritative and regular; and it is remarkable as occurring in a species (*Corvus cornix*) so near akin to the rook. The Crow Court is a sort of general assembly of birds who, in their usual habits, are accustomed to live in pairs, scattered at great distances from each other; and when they visit the south or west of England, as they do in severe winters, they are commonly solitary. In their summer haunts in the Shetland Islands, numbers meet together from different points, on a particular hill or field; and on these occasions the assembly is not complete, and does not begin its business, for a day or two, till, all the deputies having arrived, a general clamour and croaking ensue, and the whole of the court—judges, barristers, ushers, audience and all, fall upon the two or three prisoners at the bar, and beat them till they kill them. When this is accomplished, the court breaks up, and quietly disperses.”

“A great number of cases, having a similar impress of the exercise of a sense of justice, might be adduced from long observation of many kinds of animals, which would forcibly illustrate the views which some philosophers have taken of the nature of morals, according to whom the virtue or righteousness of an action in the individual consists almost wholly in its utility to the community of which he forms a part, as distinguished from that which in motive and purity is moral and universal. This simply utilitarian virtue in some animals, in other races, and still more in the human race, would become the worst of vice, of badness, and madness; and destroy the only true distinction between what is most to be commended as good, and what is most to be detested as vile.”

This is the concluding paragraph of the work. The copious and varied extracts we have made will put our readers fully into the possession of Mr. Couch's views of the mysterious faculty of *instinct*. They will find, he has traced its rise in organic life, and exhibited it in a progressive condition of development according as sensibility was added to simple automatic existence, and intellectuality was engrafted upon sensibility. Innate appetites and passions in animals are, in his view of the subject, but so many *instincts*. We have in fish as well as birds the instinct of making nests for their *ova*, and in the latter the wonderful instinct of periodical migration. While in many beasts, instinct in some of its forms is exhibited so closely allied to what we can call by no other name than *reason* that the best explanation we can offer to such impulses probably is to say with our author, that, in proportion as the reasoning faculty is found to exist in brutes, “its sole appropriation is as *the servant of instinct*,” whereas, in man, in direct opposition to this, “the instincts (appetites and pas-

sions) are designed to be but *the servants not the masters of reason.*" Thus, is a grand line of distinction drawn between the mind of man and what he may call the mind of the brute. Man, however, even in his least civilized condition, possesses instincts of which the brute has no conception; at the head of which, and of all, must be placed that divine aspiration so beautifully expressed by Burns,

" And if there is no other scene of being,
Where my insatiate wish may have its fill,
This something at my heart that heaves for room,
My best, my dearest part, was made in vain."

THE VETERINARIAN, DECEMBER 1, 1847.

Ne quid falsi dicere audeat, ne quid veri non audeat.—CICERO.

WITH that urbanity and condescension which has all along characterized the proceedings of the Home Office in so far as the Royal College of Veterinary Surgeons have been concerned in them, our worthy President has had transmitted to him, in answer to his application, a copy of the Charter for which the London and Edinburgh Veterinary Colleges and their respective supporters are at this moment petitioners; to receive and consider which a special council—whereof a report will be found in our present Number—has within the past month been convened. The "alterations" suggested to be made some months ago in the present Charter, together with the "petition" for the new one, already in the hands of the Council, had pretty well prepared the minds of its members for what the burthen of the said sued-for Charter might consist in; nor have they been doomed, in the main, in any preconceived notions they might have formed relative thereto, to experience either surprise or disappointment. The new instrument is based upon the same foundation as served for the suggested "alterations;" the superstructure, however, is modified, in places altogether altered, and is worked out into more lengthiness and detail than was conspicuous in the document submitted

heretofore to the Council. It carries the appearance of having to boast of divers concoctors, each of whom has been permitted his contribution; but, ultimately, of having experienced the misfortune of never having fallen into hands armed with the power, or, if invested with the power, possessing the ability, of so shaping and modifying the several contributions as to fit them into harmonious association one with another, and thus cement them into one compact and finished whole.

The groundwork of the proposed Charter is this:—It is provided that there should be a Veterinary Council, which shall consist of thirty members, to be elected out of the profession, exclusively of the Professors of the respective Veterinary Colleges of London and Edinburgh, who are to be *ex officio* members thereof; so that the entire number will probably be about thirty-six. The Council, thus constituted, are to have, as the present Council have, the making of the by-laws and the general management of the affairs of the professional body. But, then, according to the new scheme, such by-laws and transactions are all to be subject to the revisal of a VETERINARY BOARD, sitting dominant in power over council and profession altogether: such "Board" to consist of the Secretary of State or his nominee, the President and Vice-President, and three nominated Governors from the Royal Veterinary College; the President for the time being and three nominees from the Highland Society; the Principal Army Veterinary Surgeon; the Veterinary Examiner of the East India Company; and the senior Professors of the respective Veterinary Colleges of London and Edinburgh.

Such being the fundamental constitution of the charter petitioned for under the title of "The Royal Veterinary College of London and Edinburgh," surely, those who have had the framing of it can never have looked forward to the day when an instrument of the kind shall come to be *at work*. Any one who has observed how matters have been going on under the present charter could have informed them, that, unless some marvellous change come over the veterinary body, there will be no more chance of the petitioners for the new charter obtaining a *majority* in their new council than they have already experienced in the present council. The thirty representative members, echoers of the *vox*

populi of the profession, will on any and every occasion out-vote the *ex-officios*, and they will with the more ease accomplish this, since, as the council meetings are to be held "at the Royal Veterinary College," or "within the county of Middlesex," the Edinburgh Professors will not find it convenient at all times to attend. But then, it may be asked, "Will not the veterinary Board annul all proceedings of Council that may be unpalatable to them?"—No doubt they will!—They will, doubtless, refer such popular enactments back to Council for re-consideration. The Council, however—the majority of them at least—may possibly prove perverse and uncontrollable—in fine, may not choose to be dictated to! What next will happen? Collision between Board and Council, and afterwards between Council and Board, until, in the end, *the new charter will not be found to work at all!* This is our omen of its fate, supposing that such a charter as is now being petitioned for should ever be granted; which, in the face of one that works so well for the profession as the present has done and is doing, we feel quite persuaded is, in the present state of affairs, any thing but likely to come to pass.

VETERINARY JURISPRUDENCE.

LONDON SESSIONS, *before the* RECORDER, *Aldermen* KELLY, GIBBS, H. SIDNEY, HUNTER, HOOPER, &c.

THESE Sessions sat this morning at Guildhall, and there was a very crowded court, in consequence of the case of the exposure of a glandered horse for sale in Smithfield market being expected to come on for trial. After several other cases of minor importance had been disposed of, William Duckwell was indicted for having exposed for sale in Smithfield market, on the 15th inst., a mare, he knowing her to be suffering under the visitation of the disease called the "glanders."

Mr. Laurie conducted the case for the prosecution, and *Mr. Payne* appeared for the defendant.

Mr. Laurie, in stating the case, said that the present prosecution had been instituted by the corporation of the City of London, under the full conviction that, if the practice of the commission of

which the defendant was accused were to be permitted to be carried on, it was impossible to calculate how lamentable, how extensive, or how fatal might be the results. A feeling of public duty, as well as a feeling of humanity, therefore, had induced the present prosecution. It would be found that on the 15th instant the defendant was discovered by one of the police on duty to be offering for sale a mare which was glandered; that the city veterinary surgeon having been called upon, had examined and pronounced her to be suffering from that noxious disease, and that she had been sent to the knacker's, where she had been killed, and afterwards a *post-mortem* examination made, when proofs of the most convincing description as to the presence of the disease had been found. The defendant had pleaded "Not guilty;" that was, if the mare was so afflicted, he had not known it. Now, it was somewhat difficult to understand such a plea, when it had happened that during the early proceedings of the seizure of the mare, and the taking into custody of the defendant, he had said that the discharge from the nostrils was the result of a cold, and not of the glanders; and furthermore, that the mare had been examined by a veterinary surgeon of the name of Daws. How was it that, without a word having been uttered upon the subject of the glanders, the defendant should mention the disease, unless he had known that the mare had been labouring under it? It was of the utmost importance that a stop should be put to the exposure of these horses in the public market, and therefore the city authorities had directed these proceedings.

Several witnesses were called, who entered into a detail of the matter, which went to the establishment of the case as opened by counsel.

Mr. Payne, on behalf of the defendant, was perfectly ready to admit the necessity there was to prevent the existence of such a proceeding as that with which his client was charged; but at the same time, in this particular instance, he was prepared with witnesses to prove that he had not been aware, any more than his master, *Mr. Bardell*, that the mare had been afflicted in the manner which had been subsequently discovered. The question of knowledge on the part of the defendant was the only question in this case, and in support of his assertion, that he was ignorant of the fact, he would, in the first instance, call the man's master, *James Bardell*, who stated that he was an extensive omnibus proprietor and job-master, that he always had from 80 to 100 horses, and that the defendant had been in his service for seventeen years. This mare had been sent up to him by one of his hay farmers, either for him to work or sell, whichever he might think best. He tried her, but found she was of no use to him, and he consequently

directed the defendant to sell her at Smithfield for £3 10s., at the same time saying that he was not to refuse £3, rather than bring her home again. His belief at that period was, that though the mare might be labouring under an attack of cold, there was not the least indication of glanders. Had he thought the latter had been the case, instead of sending the mare for sale, he should have had her killed. The witness then proceeded to say, that although the mare had been put into a stable with other horses whilst he had had her, not one of them had caught the infection. As a proof that he had no idea of the mare suffering under such an attack, he had offered to bet a sovereign to a shilling upon it. He did not see any symptoms or indications of the disease until the *post-mortem* examination had taken place, and then he certainly did. These indications, however, were too high up the nostrils to be seen prior to death.

Cross-examined.—He had tried the mare at omnibus and other work, but had found her useless. Knew nothing about the nostril having been greased with the view of disguising the character of the discharge, and, what was more, he had not seen any of the latter. He first sent the mare to Smithfield three days after he had had her. He had not had her examined by a veterinary surgeon before she was taken to Smithfield.

A veterinary surgeon of the name of *Ainslie* stated, that he had examined the mare prior to her death, but had not found any indications of the disease. He had seen a more violent and a worse discharge of mucus from the nostrils of a horse which had arisen entirely from cold.

Cross-examined.—On the *post-mortem* examination they had found the evidences of the disease. There were also tubercles on one lobe of the lungs; but similar usually resulted from age in a horse. With reference to the contagiousness of the disease, he did not entertain the opinion that it was so much so as others did.

H. Daws, another veterinary surgeon, said he had examined the mare on the Friday evening after she had been taken to the knacker's, but had been unable to discover any symptoms of glanders, although he must say he regarded it as a case of suspicion. He had never seen her until that evening, and, therefore, if the defendant had stated that he had examined her prior to her being taken to Smithfield, he had said that which was not correct.

Mr. Laurie replied.

The Recorder then summed up, and said that the simple question now was, had the defendant, when he offered this mare for sale in the public market of Smithfield, known that she was so glandered? That she was so was quite clear from the evidence. Well, then, if the jury were of opinion that he had, their duty would be to

find him guilty. It was a most serious case in every way. If the defendant were not himself guilty, he had no hesitation in saying that there were others who were far more so.

The Jury returned a verdict of Guilty, but said that they considered he had acted under the direction of his master.

The Recorder, in passing sentence, said he quite agreed on this latter point with the Jury, and with that impression the court hoped that the punishment which was about to be passed upon the defendant would be felt by the person under whose directions he had acted. With that view the Court intended to impose a fine, and until that penalty were paid to direct the defendant to be imprisoned; and after the highly favourable terms in which his master had spoken of the defendant, if that person were a man possessing any conscience or regarded his character, he would not permit the alternative to come into operation even for one moment. The fine the court sentenced the defendant to pay was £10, which sum must be paid ere he could be set at liberty. If the Court did not think that there was some other person to blame, the defendant might rely that a much severer punishment in the shape of imprisonment would have been ordered; for the great frequency of this offence rendered it a matter of necessity that a heavy punishment should be inflicted, in order that others may be deterred.

The fine was immediately paid by Mr. Bardell, the defendant's master.

The Times, Oct. 25th.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

Sitting of November 3, 1847.

A SPECIAL MEETING.

Present—the PRESIDENT, the SECRETARY, Messrs. ARTHUR CHERRY, FIELD, HENDERSON, JAMES TURNER, BRABY, PERCIVALL, ERNES, and CHERRY, sen.

The minutes having been read and confirmed,

The President stated that, in consequence of the resolution passed at the last sitting, he had applied to the Home Secretary, Sir George Grey, for a copy of the proposed draft for a new charter, and which the Right Hon. Bart. had granted.

The Secretary then proceeded to read the document, a very lengthy, verbose affair—containing tedious puerile repetitions, interspersed with bombast. The present Charter had been largely borrowed from, and which portions were the only really valuable parts of the document. The new portions are very much like the document which was submitted to the Council, and the reply to which appeared in *THE VETERINARIAN*, vol. xix, p. 694; there being a little softening down of some parts; and, *mirabile dictu*, after all the virulent opposition that has been directed towards “apprenticeship,” a clause actually requiring the same is inserted; and, in order to render the schools more dignified, the profession more select, and to disseminate throughout the kingdom more extensive knowledge of the veterinary art, the “tag-rag and bob-tail” of the Pharmaceutical Society and the refuse of the human schools of medicine are to be admitted on particularly favourable terms. As a matter of course, the catch-penny clause of a superior Board was in all due magnitude inserted. The reading of the precious document being concluded, no discussion ensued, the effect being so irresistibly comic, that the whole Board, with only one solitary exception, burst simultaneously into a shout of laughter.

Mr. Percivall moved, and *Mr. Field* seconded, “That a committee be appointed to consider and make a report on the document just read.”—Carried.

The same gentlemen also moved, “That the committee do consist of Messrs. Ernes, T. W. Mayer, Arthur Cherry, and the Secretary.”—Carried.

The Secretary read a neat acknowledgment from Dr. M'Gregor for the vote of thanks accorded to him for his services as Secretary to that portion of the Examining Board acting for Scotland.

A notice of motion for an order in Council was given by Mr. T. W. Mayer.

A notice of motion was also given by Mr. Robinson; both these notices were ordered to be suspended in the usual way.

Mr. Arthur Cherry's motion on the Registration, seconded by *Mr. Jas. Turner*, was carried; as also the motion on Finance, on being seconded by *Mr. Percivall*. Both these motions relating to *pro formâ* arrangements do not require comment at present.

Adjourned.

Notice of motion from Mr. *T. W. Mayer*—“That for the purpose of further raising and extending the welfare and dignity of the veterinary profession, it is desirable that certain honorary appointments be created in connection therewith; such appoint-

ments to comprise a Patron, twelve Vice-Patrons, and a proportionate number of Honorary Associates; the parties so elected not, however, to be deemed members of the body politic and corporate."

Sitting of November 24, 1847.

Present—the PRESIDENT, the SECRETARY, Messrs. A. CHERRY, WILKINSON, PEECH, V.P., GOODWIN, FIELD, BRABY, PERCIVALL, HENDERSON, JAS. TURNER.

The minutes being read and confirmed,

The President stated, that this meeting was convened for the purpose of deciding upon the propriety of granting a special examination.

A long discussion ensued, which terminated in leaving the matter entirely in the hands of the President.—Adjourned.

MISCELLANEA.

PUNISHMENT FOR EXPOSING A GLANDERED HORSE FOR SALE.

Guildhall.—On Saturday, Samuel Jordan, a carman and horse-jobber, attended before Mr. Alderman Moon to answer the complaint of the sergeant of the Smithfield police, for bringing into the market for the purpose of sale a glandered horse.

Sergeant White stated, that his attention was drawn to this horse by one of the policemen. He found two horses tied to a rail, not in that part of the market appropriated to the sale of horses, but in the sheep-market. One of the horses was labouring under a profuse discharge from the nose, and a little boy was standing close to the horse's head. Its head projected over the rail, and the discharge dropped partly on the rail, and partly on the backs of the sheep in the pen. The sheep had been sold to a butcher, and were afterwards fetched away in order to be killed. He untied the horse, and while he was leading it across Smithfield, the prisoner came up and claimed it, stating that he had sold it to Cross, a

horse-slaughterer, and he required it should be delivered to him. Cross was there, but said nothing. Complainant persisted in taking care of the horse, and led it to Atchelors, a horse-boiler, in Sharp's-alley, Cow-cross. The defendant denied his right to take any notice of it, as he did not bring it into the part where the horses are exposed for sale. He was a frequenter of the market, and he and others had a notion they had a right to bring their diseased horses into the sheep-market for sale, and have their benefit of the little competition in the knackers' bidding, instead of sending for the knacker to fetch the horse, or taking the horse direct to the knacker in the old way. After securing the horse, he returned and examined the place where it had stood, and he found about half a pint of the discharge lying about on the ground and on the rail.

Mr. Alderman Moon asked how long it had been standing there ?

The sergeant said he did not know of his own knowledge.

Wallsgrave, a policeman, proved that he saw the horse in the sergeant's care, and shewed it to the veterinary surgeon who is appointed inspector of the horse market.

Mr. Nice, the surgeon, deposed, that the disease was contagious, and communicable to man. It was a decided case of glanders of long standing.

Hodges, a policeman, proved that the horse had been standing tied up to the rail twenty minutes before it was removed.

The defendant said he only intended to sell it for killing. He sent for Atchelors, but he did not come for it, and he then sent for Cross, another knacker. He kept it quite away from the other horses.

Mr. Alderman Moon said, he had no right to bring horses affected with a virulent contagious disease into any part of a public cattle market; it was impossible to say what mischief might not ensue from the act he had committed. If he meant to sell the horse to Atchelors or Cross, he might have led it to their premises, instead of into Smithfield. He would endeavour to stop this dangerous practice by requiring the defendant to find bail to answer for the misdemeanour at the sessions, and direct the City Solicitor to prosecute him.

In default of sureties, the defendant was committed.

The Times, Nov. 8th.

CRUELTY TO A HORSE.

Clerkenwell.—Jonathan Starling, aged 16, was charged with cruelty to a horse.

Mr. John Stephenson, gentleman, residing in Camden-town, deposed that he saw the prisoner driving a horse and cart near the Brecknock Arms, and the animal was covered with sores, and the blood was literally running from its neck, and from that part under the collar; and the poor animal was evidently in the greatest torture. On questioning the prisoner, he said he had driven it from Enfield. His master told him if he was stopped with it, he (the prisoner) would not be punished, they would only take the horse. Witness gave him into custody, and the horse and cart were taken possession of, and were then at the back of the court.

Mr. Tyrwhitt.—Pray who is your master? Prisoner. He is a higgler, living at the King's Arms, Enfield.

Mr. Tyrwhitt (indignantly).—Your conduct is detestable; you are as bad as your master, and I will teach you that poor animals were sent here for man's use, and not his abuse. It is persons of your class that grow up in crime of the worst description. You begin with cruelty to dumb animals, and then you become reckless as to committing acts of cruelty, and probably come to the gallows. As long as I sit here I am determined to check such acts of cruelty by inflicting the severest penalty of the law. None but cowardly fellows would be guilty of such conduct; they will ill-use a poor dumb creature, and run away like cowards if they themselves are attacked. On such a person as yourself I have no doubt that any thing I can say will have no effect. I hope it may; and to convince you that you shall not be guilty of such horrid cruelty in future with impunity, I convict you in the penalty of 20s., or ten days' imprisonment.

The prisoner was committed to prison in default of payment, and the horse and cart were detained. *The Times, Nov. 10th.*

EFFECTS OF SALT IN FOOD.

FROM some experiments made at the Agricultural Institution at St. Germain's, it appears that a sheep which increased in weight a kilogramme (about $2\frac{3}{4}$ lbs. Troy) and a half a month, increased double that amount in the same space of time when three grammes of salt (about the tenth of an ounce) were added each day to its food.—*Morning Chronicle.*

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